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ANTIBODY AND T CELL IMMUNE RESPONSES AFTER COVID-19 VACCINATION AMONG DIALYSIS PATIENTS AND KIDNEY TRANSPLANT RECIPIENTS

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INTRODUCTION

Studies have shown reduce seroconversion rate post SARS-CoV-2 vaccination among dialysis patients and kidney transplant recipients. Besides, antibody levels post vaccination appear to wane faster especially in patient taking immunosuppressants therapy and up to date, there is no well-defined cut-off antibody level to indicate adequate protective immunity. Unlike antibody response, memory T-cell response persists and able to stimulate B cells to produce neutralizing antibody via adaptive immunity.

METHODS

This is a prospective study to assess antibody responses and T-cell cellular response for 62 dialysis patients and 49 kidney transplant recipients post SARS-CoV-2 vaccination in University Malaya Medical Centre.

RESULTS

Dialysis patients showed a profound high seroconversion rate (97.8%, p value <0.001) and good T cell immune response after vaccination (77.4%, p value= 0.004). Large proportion of transplant recipients (59.2%) had negative seroconversion following 2 doses of SARS-CoV-2 vaccine, with poor T-cell response (44.9%) even after dose 3 vaccine and up to 32.7% of them showed non- reactive results for both antibody and T cell response (P value=0.004). There is a moderate correlation of anti-SARS-CoV 2 antibodies to T cell immune responses in kidney transplant recipients in relation to vaccination (p value =0.033, r=0.305).

CONCLUSION

Dialysis patients have higher serological vaccination response compared to kidney transplant recipients. Kidney transplant recipients have impaired humoral and cellular immunity which is associated with immunosuppressive therapy. Checking for antibody and T-cell cellular response post SARS-CoV-2 vaccination might be beneficial in identifying kidney transplant recipients who are SARS-CoV-2 vaccine non-responders. These patients might beneficial from pre-exposure prophylaxis, modification of immunosuppressive therapy or alternative vaccination strategies, e. g. higher vaccine dose.

Category: Doctor

Topic: COVID-19

Session: Oral + E-Poster Display

Submission ID: 61

Abstract ID: MSN2023-OP01



THE PROPORTION OF READMISSION AMONG CHRONIC KIDNEY DISEASE (CKD) PATIENTS WITH COVID-19 INFECTION & ITS ASSOCIATED FACTOR

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INTRODUCTION

CKD patients are among the vulnerable groups for severe COVID-19 infection with poor outcome. This study aims to estimate the proportion of readmission among CKD patients with recent COVID-19 infection and the associated factors

METHODS

This is a retrospective secondary record data review study involving CKD patients with COVID-19 infection from December 2020 to August 2021 admitted in two tertiary hospitals in Kelantan. Adult CKD patients (eGFR<60ml/min) with confirmed COVID-19 infection were included in the study. Patients transferred to another facility upon discharge & those with in-patient mortality were excluded. Sociodemographic profiles, clinical and laboratory parameters, as well as duration of stay for the index hospitalisation were collected. Study outcome was readmission within 12 weeks post discharge which was identified using electronic medical record. The data was analysed using SPSS Statistic version 26. Simple and multiple logistic regression was used to determine important predictors for readmission.

RESULTS

A total of 140 patients who fulfilled study criteria were included. Mean age was 60.3 (SD=12.47) years old with 35.7% were ESRF patients, followed by 21.4% CKD 4 and 15.7% CKD 3B. The proportion of readmission was 24.3% (34 patients) with 7 deaths (20.6%) during second hospitalization. Common reason for readmission

were pneumonia (50%), acute respiratory distress (41.2%), sepsis (35.3%) & AKI on CKD (32.4%). Important variable identified from simple logistic regression were DM, cardiac disease, duration of stay, ICU admission, acute kidney injury & acute coronary syndrome. The predictors for readmission from multivariable analysis were underlying DM (P=0.037) and cardiac disease (P=0.004).

CONCLUSION

Our study showed that readmission rate among CKD patients was relatively high. Those with Type II DM and cardiac disease should be given extra care to optimise condition prior to discharge. Further study with larger sample size should be conducted to ascertain our findings.

Category: Doctor

Topic: COVID-19

Session: Oral + E-Poster Display

Submission ID: 122

Abstract ID: MSN2023-OP02

COLLAPSING VARIANT FSGS IN A SINGLE TERTIARY NEPHROLOGY CENTRE: CLINICAL CHARACTERISTICS AND OUTCOMES.

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INTRODUCTION

Collapsing variant of FSGS is an uncommon form that is associated with poorer prognosis. In this study we attempt to elucidate the clinical and laboratory features of this variant.

METHODS

All patients who had undergone renal biopsy in Hospital Serdang and had documented diagnosis of FSGS from January 2007 until December 2022 were identified. Total of 60 primary FSGS were identified with 8 of them being collapsing variant. Data was collected analysed using SPSS version 17.

RESULTS

In this cohort, 13% of primary FSGS were of the collapsing variant. Male to female ratio was 1:1 with mean age of diagnosis was 30 years. Four patients had hypertension while two patients had diabetes mellitus. 3 patients had positive family history of ESKD. 7 patients had some form of haematuria. 6 patients were on steroids while 6 had AKI at diagnosis. Nephrotic syndrome was seen in 6 patients. 6 patients were obese. None of the patients have retroviral disease. Mean follow up was 6.3 years. All patients with nephrotic syndrome were treated with steroids however 2 patients developed steroid related complications. 4 patients were started on second line treatment, namely azathioprine or cyclosporine. 4 patients developed ESKD requiring kidney replacement therapy within 6 years from diagnosis and one patient passed away due to acute coronary syndrome. One

patient developed CKD while two more have preserved normal renal function. Histopathological examination showed 5 patients had IgM deposits positivity and 3 patients had C3 positivity. However, all patients had normal serum C3 levels.

CONCLUSION

Collapsing variant had a higher prevalence in our cohort than in the reported literature (5%). Notably, these cases were not associated with retroviral disease. The renal survival is poor as 50% have developed ESKD, which is comparable to the literature.

Category: Doctor

Topic: Glomerulonephritis

Session: Oral + E-Poster Display

Submission ID: 147

Abstract ID: MSN2023-OP03



CLINICAL FEATURES AND OUTCOMES OF FOCAL SCLEROSING GLOMERULOSCLEROSIS (FSGS) IN A SINGLE TERTIARY NEPHROLOGY CENTRE.

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INTRODUCTION

Focal sclerosing glomerulosclerosis (FSGS) is a clinicopathological diagnosis defined as primary and secondary according to the presence or absence of nephrotic syndrome.

METHODS

This retrospective study included all patients who had undergone renal biopsy in Hospital Serdang and had documented diagnosis of FSGS from January 2007 until December 2022. A total of 140 patients fulfilled these criteria. 38 patients were excluded due to follow up less than six months and transfer to another centre. Data was collected and analysed using SPSS version 17.

RESULTS

From our cohort, 59% had primary FSGS with 55% were male. At point of biopsy, 36.2% patients had hypertension, 8.8% had diabetes mellitus and 48% had acute kidney injury. 7.8% of the cases were of the collapsing variant. 64% patients were obese at time of diagnosis. Patients remained in follow up for an average of 5.7 years with 54.5% having normal renal function at end of follow up with median eGFR of 74ml/min/1.73m². The median age at diagnosis was 33 years old, with systolic blood pressure of 136mmHg, proteinuria of 7.1g, albumin of 23g/L, urea of 5.9mmol/L, creatinine of 112umol/L, eGFR of 71ml/min/1.73m², total cholesterol of 9.8mmol/L, LDL of 6.9mmol/L. Proteinuria at diagnosis, albumin, haemoglobin, platelet, total cholesterol, triglycerides, LDL and eGFR at end of follow up

were significantly different between primary and secondary FSGS. 65% of primary FSGS achieved complete remission, with average time to remission being 28 months. 10 patients achieved complete remission within 12 months. 9 patients with primary FSGS had doubling of serum creatinine at end of follow up. 3 mortalities were recorded with all three causes of death being acute coronary syndrome.

CONCLUSION

The response rate of patients in this cohort was higher compared to literature with comparable 5-year renal survival with no significant decline in GFR over 5.7 years of follow up.

Category: Doctor

Topic: Glomerulonephritis

Session: Oral + E-Poster Display

Submission ID: 135

Abstract ID: MSN2023-OP04

EFFECTIVENESS OF HEART RATE VARIABILITY FOR PREDICTING INTRADIALYTIC HYPOTENSION IN CHRONIC HEMODIALYSIS PATIENTS

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INTRODUCTION

Intradialytic hypotension (IDH) is the most common complication during hemodialysis and is reported to occur in 20–30% of hemodialysis sessions. Although there are differences among the study results due to the inconsistent definition of IDH, according to a recent meta-analysis, IDH according to the nadir 90 criterion was reported to have the highest association with the patient survival rates. IDH is a complication caused by the complex action of various factors. The heart rate variability (HRV) test is a non-invasive and relatively simple method to measure autonomic nervous system activity. To date, no studies have demonstrated the usefulness of the HRV test in predicting IDH based on nadir 90 criterion. This study was aimed to elucidate the usefulness of the HRV test in predicting the occurrence of IDH based on nadir 90 criterion.

METHODS

This study was a multi-center prospective observational study. Among patients on hemodialysis for more than 3 months, those who have arrhythmias and patients with systolic blood pressure below 90 mmHg before hemodialysis were excluded. Thus, a total of 70 patients were enrolled in this study. Blood tests, echocardiography, and body composition measurement results were collected, and HRV test was performed for 24 hours during non-hemodialysis period. And then, a total 12 hemodialysis sessions were monitored. The

patients were divided into the IDH group and non-IDH group and were compared. HRV index model was developed by a multivariate logistic regression analysis. The predictive value of IDH occurrence was analyzed through area under the receiver operating characteristic curve (AuROC) value.

RESULTS

According to the nadir 90 criterion, 37 patients were placed in the IDH group, and 33 patients in the non-IDH group. Using various parameters of the HRV test, we developed an HRV index model. The AuROC value for IDH occurrence (occurring even in one session) of the developed HRV index model was 0.776. The AuROC value for frequent IDH occurrence (occurring in more than 10% of sessions) was 0.803. Furthermore, a high HRV index (> 0.544) was observed as an independent risk factor after adjusting for confounding factors.

CONCLUSION

The HRV test can be used as a useful tool to predict IDH. This is the first study to demonstrate the usefulness of the HRV test in prediction of the IDH occurrence according to the nadir 90 criterion.

Category: Doctor

Topic: Hemodialysis

Session: Oral + E-Poster Display

Submission ID: 15

Abstract ID: MSN2023-OP05

EVALUATING THE USAGE OF INTRADIALYTIC BLOOD CULTURES IN DIAGNOSING CATHETER RELATED BLOOD STREAM INFECTION

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INTRODUCTION

Vascular access is the "Achilles tendon" of hemodialysis (HD) therapy. One of the major complications is catheter related bloodstream infection (CRBSI). The initial criteria for CRBSIs is based on indwelling central catheters in non-HD patients, in which peripheral vein cultures are the gold standard. This study aimed to validate if intradialytic blood culture can be used to replace peripheral blood culture to diagnose CRBSI(1).

METHODS

This was a single-centre, cross sectional, prospective study involving HD patients with indwelling dialysis catheter who were admitted to Hospital Canselor Tuanku Muhriz for suspected CRBSI between March 2021 and January 2023. The blood cultures were taken from the central (catheter hub) and peripheral vein as per IDSA guidelines. Additional two sets of blood cultures were taken from the dialysis circuit at 2nd and 4th hour of HD. The sensitivity, specificity, and accuracy were calculated using peripheral vein cultures as the gold standard. The baseline demographic, clinical parameters, antibiotic therapy and list of medications were recorded.

RESULTS

We recruited 200 patients who were treated for suspected CRBSI with a median age of 64 years

old and almost similar gender ratio. Majority were on tunneled-dialysis catheters (60.5%). The proportion of patients confirmed CRBSI with IDSA criteria and combination of central/intradialytic 2hr culture were 48% and 40% respectively. The 2nd hour intradialytic blood culture was more sensitive and accurate (the sensitivity: 72.38%, specificity: 86.32% and accuracy: 78 %) but slightly less specific than 4th hour intradialytic culture (65.71% , specificity : 88.42% and accuracy: 76.5%). The agreement of organisms cultured from intradialytic versus peripheral vein culture were 100% with $p < 0.0001$ at both 2nd hour and 4th hour of HD. Gram positive organisms were predominant (58%) followed by gram negative organisms (35%). Twenty patients (10%) died following the episode of CRBSI.

CONCLUSION

The use of intra-dialytic culture in lieu of peripheral blood culture for diagnosing CRBSI is justifiable. It will not only ensure an adequate amount of blood sampling, but it is also a painless and vein-preserving procedure. Thus either intradialytic alone or combination with central culture may be an option for culture confirmation in the dialysis population.

Category: Doctor

Topic: Hemodialysis

Session: Oral + E-Poster Display

Submission ID: 88

Abstract ID: MSN2023-OP06



THE ECHOCARDIOGRAPHIC CHANGES FOLLOWING ARTERIOVENOUS FISTULA CREATION IN PATIENTS WITH ADVANCED CHRONIC KIDNEY DISEASE

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INTRODUCTION

Arteriovenous fistula (AVF) is a common tool for maintaining hemodialysis (HD) treatment among patients with end stage renal disease and has been postulated to cause maladaptive cardiac remodeling. In this prospective study, we aim to examine the echocardiographic changes in patients with advanced chronic kidney disease (CKD) following AVF creation. Further sub analysis is done to determine if these significant changes is affected by the proximity and flow rate of the fistula.

METHODS

A total of 34 patients were enrolled and underwent echocardiography at baseline, 23 patients had echocardiography at 4-12 weeks post AVF while 22 patients had echocardiography at >12-36 weeks post AVF. Exclusion criteria included those with poor LVEF < 45%, underlying atrial fibrillation or valvular heart disease, and patients initiated on hemodialysis prior to fistula creation.

RESULTS

Significant elevations in left ventricular end diastolic volumes and stroke volumes seen at post fistula creation in both 4-12 weeks and >12-36 weeks, resulting in a significant increase in cardiac index by 32% (p=0.004) at 4-12 weeks and 40% (p=0.002) at >12-36 weeks. At 4-12 weeks, the increase in cardiac index was higher in proximal group of fistulas by 38% (p=0.032) vs

distal by 26% (p=0.074). At >12-36 weeks, the increase in cardiac index was higher in AVF with flow rate > 600mls/min by 52% (p=0.027) vs AVF with flow rate <600mls/min by 19% (p=0.042). Mild increase in PASP noted at 4-12 weeks.

CONCLUSION

AVF creation is associated with an increase in cardiac index among CKD patients, particularly in those with proximal AVF and AVF with flow rates > 600mls/min. Patients at higher risk of heart failure may be vulnerable to these hemodynamic effects of AVF. In this group of patients, specific considerations in terms of optimal dialysis access and renal replacement therapy needs to be addressed.

Category: Doctor

Topic: Hemodialysis

Session: Oral + E-Poster Display

Submission ID: 16

Abstract ID: MSN2023-OP07

THE KIDNEY FAILURE RISK EQUATION: EVALUATION OF ITS ACCURACY IN TRANSPLANT RECIPIENTS

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INTRODUCTION

There has been emerging evidence that 4-variable KFRE assessed at 1-year posttransplant can be used for risk prediction of allograft loss. However, little is known about whether using 8-variable KFRE improves prediction and the optimal timing. We aimed to evaluate the performance of 4 and 8-variable KFREs assessed at 1 and 2-year after transplant for prediction of the 5-year death-censored allograft failure in University Malaya Medical Centre.

METHODS

We included kidney transplant recipients between 2006 and 2016. The primary outcome was death-censored allograft failure, defined as starting dialysis or undergoing retransplantation. The 5-year risk of graft failure was predicted using KFRE assessed closest to 1-year and 2-year posttransplant. The area under the receiver operator characteristic curve (AUC) and calibration plots were used to evaluate discrimination and calibration respectively.

RESULTS

A total of 43 patients were involved in the analysis. 7 (16.3%) graft failure events were observed in the whole cohort. The 4-variable and 8-variable KFRE calculated at 1-year posttransplant demonstrated AUC of 0.689 (95% confidence interval [CI] 0.404-0.975) and 0.671

(0.372-0.970) respectively. Discrimination was similar at 2-year posttransplant KFRE assessment which were 0.683 (0.413-0.952) and 0.692 (0.428-0.957). Meanwhile, excellent discrimination was observed in patients with eGFR of <60ml/min/1.73m² in which the AUC for 8-variable KFRE was 0.833 (0.532-1.000) at 1-year and improved to 0.857 (0.579-1.000) at 2-year posttransplant. Interestingly, highest AUC [0.905 (0.695-1.000)] was found in 4-variable KFRE at 2-year posttransplant. However, with respect to calibration, we found that the 4 and 8-variable KFRE did not accurately predict observed events.

CONCLUSION

KFRE demonstrated adequate discrimination for predicting 5-year risk of graft failure especially in patients with eGFR of <60 ml/min/1.73m². Its predictive performance is limited due to inadequate calibration and further validation in larger cohorts will be useful to gauge its potential role in the clinical implementation.

Category: Doctor

Topic: Hemodialysis

Session: Oral + E-Poster Display

Submission ID: 195

Abstract ID: MSN2023-OP08



EFFICACY OF A SMARTPHONE HEALTH APPLICATION IN PATIENTS WITH CHRONIC KIDNEY DISEASE (E-HEALTH IN CKD): A PILOT STUDY

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INTRODUCTION

Chronic kidney disease (CKD) is a global public health issue with self-management playing a crucial role in reducing risk factors and delaying the decline in kidney function. This study evaluated the efficacy of a smartphone application (app) called "Care for Kidney" among CKD patients.

METHODS

The study was conducted from November 2021 to June 2023, and included 116 participants with CKD stages 2-4. Participants were randomly assigned to an intervention group (n=56) receiving the "Care for Kidney" app or a control group (n=60) that received standard care. The study had two phases: a usability and acceptability study of the CKD app in phase 1 and a 12-month pilot randomized controlled trial in phase 2. As of 28th February 2023, 89 (76.7%) participants had completed their month 8 visit. This interim analysis was based on 8-month results.

RESULTS

After 8 months, both groups showed reduction in HbA1c and blood pressure (BP), however differences were not statistically significant. Nevertheless, the intervention group showed greater reduction in systolic BP compared to control group [mean differences -10.45 mmHg (95% CI, -16.39 to -4.51) vs -6.94 mmHg (95% CI, -12.6 to -1.28); p=0.396]. The changes in eGFR between both groups were also not statistically significant.

In phase 1, the usability of the CKD app was evaluated using the Post-Study System Usability Questionnaire (PSSUQ). The app obtained an average score of 2.15 overall, 2.28 for system usability, 2.07 for information quality, and 2.09 for interface quality, indicating good usability and acceptability among users.

CONCLUSION

There were no significant differences in glycemic and BP control between the intervention and control groups after 8 months. However, the "Care for Kidney" app was well-received by users and showed potential for promoting self-management and improving patient outcomes in CKD. Further analysis is required once this study is completed.

Category: Doctor

Topic: Others

Session: Oral + E-Poster Display

Submission ID: 101

Abstract ID: MSN2023-OP09

INSIGHTS INTO THE HEALTH CHALLENGES FACED BY ELDERLY DIALYSIS PATIENTS IN MALAYSIA: A STUDY ON SYMPTOM BURDEN AND FRAILITY SEVERITY

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INTRODUCTION

End-stage kidney disease (ESKD) is a growing public health concern, particularly among the elderly who have experienced a substantial increase in its incidence over the past decade. With the rise in ESKD among the elderly, managing the disease become increasingly challenging due to the physiological changes associated with aging, diverse goals of care, and the presence of geriatric syndromes, including frailty. Additionally, the chronic nature of the disease and potential complications from treatment can lead to debilitating, making it even more critical.

METHODS

This is a cross-sectional study among elderly ESKD patients on dialysis (N = 150) at Hospital Serdang and multiple hemodialysis centers in Klang Valley. Symptom burden was determined using the Dialysis Symptom Index (DSI) questionnaire, while frailty severity assessment was done using the Rockwood Clinical Frailty Scale.

RESULTS

The study results showed that a significant percentage of patients had a moderate to high symptom burden, indicating the pressing need for tailored care interventions. Specifically, 42% of the patients had a moderate symptom burden, while 4.7% of the patients had a high symptom burden. The most reported symptoms were

feeling tired or lacking energy, dry skin, and muscle cramps, affecting a significant number of patients. In terms of frailty, the study showed that 28.7% of the patients were frail, and 14% of the patients were severely frail, highlighting the critical need for a comprehensive assessment of frailty and consideration of other confounding factors.

CONCLUSION

The findings from this study underscore the critical importance of personalized care for elderly dialysis patients, as symptom burden varies widely, and frailty can have significant implications on the patient's overall health outcomes. Healthcare providers must consider the specific needs of the elderly dialysis patients and provide tailored care interventions to mitigate the impact of ESKD and its associated symptoms.

Category: Doctor

Topic: Others

Session: Oral + E-Poster Display

Submission ID: 58

Abstract ID: MSN2023-OP10

ROLE OF SALIVARY CREATININE AMONG THE CHRONIC KIDNEY DISEASE (CKD) PATIENTS IN UNIVERSITY MALAYA MEDICAL CENTRE

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INTRODUCTION

The estimated prevalence of chronic kidney disease (CKD) worldwide is 843.6 million individuals with patients requiring renal replacement therapy (RRT) ranges from 4.092 to 7.083 million. In Malaysia, meanwhile, the prevalence nearly doubled in just 7 years, rising from 9.07% to 15.5%. Serum creatinine levels are used to determine the estimated glomerular filtration rate (eGFR). Salivary creatinine testing, a new technique, has been demonstrated as a promising screening approach in CKD patients. The main objective was to explore the usefulness of salivary creatinine as a new potential screening tool for patients with CKD by comparing salivary and serum creatinine levels across all ranges of eGFR. The study also seeks to determine the cut-off value in which salivary creatinine level may indicate eGFR <60mls/min/ 1.73m².

METHODS

A prospective cross-sectional study of adults with CKD attending the nephrology clinic of the University of Malaya Medical Centre (UMMC) was conducted throughout study period from 1st October 2021 to 31st January 2023. The identified patients throughout all ranges of eGFR were invited to take part in the study, in which the patient's saliva and blood sample were collected in the same setting.

RESULTS

A total of 150 patients were enrolled with mean age of 62, majority were female, 56.7%. The

mean of serum creatinine was 210 µmol/L and salivary creatinine had a median value of 10µmol/L throughout all range of eGFR.

Overall, there was a significant positive correlation between serum and salivary creatinine in all patients ($r = 0.57$, p -value = 0.001). A total area under the curve of 0.81 was determined by a Receiver Operating Characteristics (ROC) analysis (p -value < 0.001, 95% CI (confidence interval) = 74.1%, 88.0%). Patients with CKD (eGFR<60mls/min/1.73m²) can be identified using a salivary creatinine value of 9.5µmol/L. This cut-off point yielded a sensitivity of 74% and a specificity of 80%.

CONCLUSION

Salivary creatinine potentially able to serve as a non-invasive screening tool for CKD patients.

Category: Doctor

Topic: Others

Session: Oral + E-Poster Display

Submission ID: 130

Abstract ID: MSN2023-OP11



THE EFFECT OF FINERENONE IN REDUCING DISEASE PROGRESSION AMONG PATIENTS WITH CHRONIC KIDNEY DISEASE: A SYSTEMATIC REVIEW AND META-ANALYSIS

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INTRODUCTION

Finerenone is a novel therapeutic option in patients with chronic kidney disease (CKD) explored in the study of FIDELIO-DKD wherein use of nonsteroidal mineralocorticoid receptor antagonists play a role in reducing proteinuria and preventing decline of estimated glomerular function rate (eGFR). However, application of this drug in the Nephrology community has been slow.

METHODS

This metaanalysis aims to evaluate the role of Finerenone in decreasing disease progression of CKD and its effect on by potassium levels and presence of anemia using five published Randomized Control Trials retrieved from PubMed, ClinicalTrials, and Google scholar utilizing the Chochrane risk of bias for quality assessment. With a confidence interval of 95%, forest plots were generated using the Revman Program. A pooled total of 14,973 patients were included in this study.

RESULTS

The results suggest that finerenone has shown significant differences on delaying CKD progression (0.86%, 95% CI [0.79 - 0.93] p = 0.0004, I² = 0%) as well as preventing further increase in urine albumin-creatinine ratio (UACR) (-0.29%, 95% CI [-0.32 to -0.27], p = <0.0001, I² 0%), hence favoring the use of finerenone. Additionally, data has shown significant increase in the levels of potassium in the blood by 1.87%, but a nonsignificant effect on the development of anemia.

CONCLUSION

Among patients with CKD, use of finerenone compared to placebo delayed the decline in eGFR and the increase in UACR, thus preventing the progression of CKD. Though it may increase the levels of potassium in the blood, the benefit of using finerenone may still outweigh the risks.

Category: Doctor

Topic: Others

Session: Oral + E-Poster Display

Submission ID: 32

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IMPACT OF OBESITY ON OUTCOMES AND SURVIVAL OF PERITONEAL DIALYSIS PATIENTS IN HOSPITAL KUALA LUMPUR (HKL)

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INTRODUCTION

The prevalence of obesity among peritoneal dialysis (PD) patients in Malaysia is increasing, from 39% in 2009 to 42% in 2018. Evidence on the impact of obesity on PD outcomes and patient survival are limited with conflicting results and their association remains unclear.

METHODS

This prospective cohort study included 209 patients who were initiated on peritoneal dialysis in HKL from January 2020 to August 2021 and followed up for at least 6 months. We defined body mass index (BMI) according to the Malaysian obesity clinical practice guideline. Demographic data, PD related outcome and laboratory results were extracted from medical records and analysed using SPSS version 26.

RESULTS

The mean age was 54.6 ± 15.8 years and 121 (58%) were male. The commonest ethnicity in this study were Malay and Chinese, with 139 (66%) and 48 (23%) patients respectively. Majority of the PD catheters (86.4%) were inserted via peritoneoscopy and 13.6% were inserted via the Seldinger method. Most of our patients were classified as obese (35%) followed by normal weight (34%). Mean BMI was 26.1 ± 4.7 kg/m² in this study.

There was no statistical difference in surgical complications between obese and non-obese patients, including minor and major bleeding, intraabdominal injury and leaking ($p=0.445$, 0.484 , 0.279 and 0.201 respectively). Infective complications (exit site infections, tunnel infections and peritonitis) were similar in both groups ($p=0.519$, 0.646 and 0.418 respectively).

There was no statistical difference in KT/V, anemia and hospitalisation rates. Using Kaplan Meier survival analysis, both groups had similar mean patient survival and catheter survival survival times ($p=0.39$ and 0.96).

CONCLUSION

PD should be considered as one of the main modalities of kidney replacement therapy in obese patients as they are not at higher risk of complications or mortality compared to non-obese patients.

Category: Doctor

Topic: Peritoneal Dialysis

Session: Oral + E-Poster Display

Submission ID: 128

Abstract ID: MSN2023-OP13



LAPAROSCOPIC TENCKHOFF CATHETER INSERTION USING AN IMPROVED PRE-PERITONEAL TUNNELING TECHNIQUE UNDER CONSCIOUS SEDATION.

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INTRODUCTION

The peritoneal dialysis (PD) preferred policy was introduced in Sabah in early 2020. To implement the policy successfully, timely Tenckhoff catheter (TC) insertion is paramount for all groups of end-stage kidney disease patients (ESKD), including those with previous intra-abdominal surgery and obesity. Obstacles are usually faced for this group. Ideally, laparoscopic TC insertion method under general anaesthetics (GA) should be used in such cases, but that will have many limiting factors such as fitness for GA and theatre time. This series aims to explore the another option that may avoid the requirement of GA in some of the cases.

METHODS

A prospective observational cohort of laparoscopic TC insertions using improvised preperitoneal tunnelling technique under conscious sedation outcome over 6 months.

RESULTS

The mean age of the patients was 51.38 (+/-13.23). The patients' mean body mass index (BMI) was 24.52kg/m² (+/-4.14). The procedure was attempted on 144 patients. 17 cases were excluded, of which 8 had successful insertions

without pre-peritoneal tunneling, 8 were abandoned due to severe adhesions (5 previous PD peritonitis, 3 previous surgery), and 1 patient was lost to follow-up. 127 cases that had successful TC insertion with pre-peritoneal tunneling were analyzed. Of the 127 patients, 96 (75.6%) had previous abdominal surgery. 16 patients had their catheters reinserted using this technique due to previously non-functioning existing TC. 3 of the patients developed primary catheter dysfunction (2.4%). 7 patients had early complications, 1 subcutaneous hematoma, 1 exit site bleeding, and 5 leaking during training. All were treated conservatively. At 6 months, the catheter survival rate was 97.6% with a patient survival rate of 95.3%. At the time of writing, median catheter survival was 18.4 months.

CONCLUSION

For previous intra-abdominal surgery, obesity and reinsertion for non-functioning existing TC, this technique is a safe and feasible method with an acceptable outcome.

Category: Doctor

Topic: Peritoneal Dialysis

Session: Oral + E-Poster Display

Submission ID: 19

Abstract ID: MSN2023-OP14



N-TERMINAL PRO-BRAIN NATRIURETIC PEPTIDE IN PERITONEAL DIALYSIS-A CORRELATION STUDY WITH CLINICAL PHENOTYPES

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INTRODUCTION

The N-terminal pro-brain natriuretic peptide (NTproBNP) is a biomarker of myocardial structure/function and fluid volume status in the general population. It has been used widely as a prognostic marker of patient's survival. However, its utility for patients with peritoneal dialysis (PD) is less certain. There has been no validated normal cut-off value of NTproBNP in the PD cohort. Our study aimed to evaluate the clinical utility of NTproBNP in assessing fluid status and heart function in PD patients and determine the cut-off of NTproBNP in predicting over-hydration.

METHODS

This is a single-center, cross-sectional observational study of stable patients on peritoneal dialysis in the renal unit of University of Malaya. Consented patients will be subjected to biochemical, echocardiogram, and bio-impedance analysis. Over-hydration state is defined by an extracellular water/total body water (ECW/TBW) ratio of ≥ 0.40 .

RESULTS

77 patients were recruited with male to female ratio of 61% (n=47) and 39% (n=30). 33 patients (42.9%) were found to have over-hydration. The proportion of cardiac function as categorized by reduced (rEF), moderate reduce (mrEF), and preserved ejection fraction (pEF) were 6.5 %, 7.8% and 85.7%, respectively. There was a positive correlation between NTproBNP with ECW/TBW ratio (r=0.484, p= <0.001).

Conversely, LVEF (r=-0.437, p= <0.001), serum albumin (r=-0.318, p= 0.005), and hemoglobin (r=-0.412, p= <0.001) were negatively correlated with NTproBNP. The performance of NTproBNP as a screening tool for over-hydration yielded an area under the ROC curve (AUC) of 0.80 (CI 95%; 0.701-0.898; P=<0.001), and threshold value of 2305 pg/ml has a sensitivity of 90%, specificity of 62%. Clinical phenotype in the elevated NTproBNP cohort revealed a statistically significant greater proportion of reduced EF, valvular problems, over-hydration, anemia, hypoalbuminemia. Mortality rate at 1st-year follow-up was statistically higher in the high NTproBNP cohort.

CONCLUSION

Our study confirmed that NTproBNP has good correlation with LVEF and hydration status in the PD cohort. It's useful in predicting some clinical phenotypes and potentially a prognostic marker for patient survival.

Category: Doctor

Topic: Peritoneal Dialysis

Session: Oral + E-Poster Display

Submission ID: 28

Abstract ID: MSN2023-OP15



RISK FACTORS AND OUTCOME OF EARLY ONSET PERITONITIS IN PERITONEAL DIALYSIS PATIENT: A SINGLE CENTRE, RETROSPECTIVE OBSERVATIONAL COHORT STUDY

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INTRODUCTION

There have been many studies examining the clinical characteristics, causative organisms, predictors and outcomes of the first episode of peritonitis in peritoneal dialysis (PD) patients. However, there are few studies for early-onset peritonitis (EOP). Therefore, this study aims to identify the risk factors for peritonitis in the early stage of PD that would improve patient's outcome.

METHODS

A total of 59 patients who had at least one episode of peritonitis were enrolled and followed up from January 1, 2020, to December 31, 2022, at our centre. According to the time to first peritonitis, we divided patients into two groups: EOP (≤ 6 months, $n=27$) and late-onset peritonitis (LOP, >6 months, $n=32$). Logistic regression was used to analyse the factors associated with EOP.

RESULTS

The mean time to first episode of peritonitis was 2.89 months in EOP group and 8.44 months in LOP group with p value < 0.001 . No difference in age and gender for both groups. Haemoglobin levels were significantly lower in the EOP group (9.05 ± 1.61 g/L) compared to the LOP group (10.50 ± 1.78 g/L) with p value = 0.002. Gram-positive organisms were the predominant pathogens identified in both groups although statistically not significant ($p = 0.739$). The multivariate logistic regression analysis showed

that the factor associated with EOP was low haemoglobin level (odds ratio (OR) 0.598, 95% confidence interval (CI) 0.418,0.856, $P=0.005$). There is no difference in technique failure for both groups but there were 2 deaths in EOP group.

CONCLUSION

Anaemia is an independent risk for EOP which can cause cognitive decline which influenced the dexterity of the patients. Therefore, further studies with a larger sample size and longer recruitment periods are needed. We should treat haemoglobin to target as early as possible to improve outcomes.

Category: Doctor

Topic: Peritoneal Dialysis

Session: Oral + E-Poster Display

Submission ID: 166

Abstract ID: MSN2023-OP16



A QUALITATIVE EVALUATION OF THE USABILITY, FEASIBILITY AND ACCEPTABILITY TOWARDS DIGITAL HEALTH INTERVENTION AMONG HEMODIALYSIS PATIENTS

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INTRODUCTION

Hemodialysis (HD) seems life-saving to patients with end-stage kidney disease (ESKD), but the compromised quality of life associated with the treatment often leads to poor adherence. Digital health interventions (DHI) appear to be a promising tool to mitigate risks of chronic illnesses. The current study explored the attitude and perception of HD patients towards DHI.

METHODS

This was a phenomenological qualitative study that involved individual, face-to-face, semi-structured interviews with 10 patients who have been given 2-week access to a locally developed app-based DHI product. Participants were recruited from three dialysis centers in Selangor. They were adults who could comprehend written and spoken English and/or Malay, owned a personal smart device, were digitally confident, had started HD for less than 12 months, and were hemodynamically stable. All interviews were audio-recorded, transcribed, and thematically analysed.

RESULTS

The analysis of data was guided by the assumption that technology acceptance is influenced by patient-related and technology/product-related factors. Responses

from participants were themed into attitude towards DHI, behavior/change intentions, perceived ease of use, and perceived usefulness. Participants revealed a high level of interest and openness to adopt DHI to complement their medical care, but had minimal engagement with the product under investigation beyond initial exploration.

CONCLUSION

On a cognitive level, patients undergoing HD welcome DHIs that provide access to information and resources, expert input, peer support, and self-monitoring tools designed to promote psychosocial wellbeing. The investigational product received generally positive feedback, with suggestions for improvement in terms of user interface. Nevertheless, user engagement was observed to be low. Future studies should explore the factors affecting DHI engagement level among patients.

Category: Paramedic

Topic: Hemodialysis

Session: Oral + E-Poster Display

Submission ID: 97

Abstract ID: MSN2023-OP17

PALM TOCOTRIENOLS IN CHRONIC HEMODIALYSIS (PATCH-MALAYSIA) STUDY: UNRAVELING THE EFFECT OF TOCOTRIENOL RICH FRACTION (TRF) TO AMELIORATE RESTLESS LEGS SYNDROME

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INTRODUCTION

Restless legs syndrome (RLS) is a common neurological disorder in patients on maintenance hemodialysis (MHD), and associates with poor quality of life and increased risk of cardiovascular disease. The anti-inflammatory and antioxidant properties of tocotrienols may potentiate against RLS. Thus, we investigated the effects of a tocotrienol-rich fraction (TRF) on the severity of RLS in MHD patients.

METHODS

RLS was examined as a secondary outcome of the PATCH (Palm Tocotrienols in Chronic Hemodialysis) study, a multi-centered, randomized, double-blind, placebo-controlled trial with enrolled Malaysian MHD patients receiving daily supplementation of 300mg TRF (n=170) or placebo (n=166) for 12 months. Patients were assessed for RLS severity at quarterly intervals

(baseline, 3, 6, 9 & 12 months) using the International RLS Study Group rating scale (IRLS). Generalized estimating equations were used to assess changes in RLS severity over time between TRF and placebo groups. Intention-to-treat (ITT) analysis was applied to determine the effect of TRF on RLS severity for all patients. Whereas sensitivity analysis was performed for MHD patients with RLS at baseline for robustness assessment.

RESULTS

Socio-demographic and clinical variables were similar between groups. IRLS scores indicated 14% prevalence (47/336 total; 23/170 in TRF vs 24/160 in placebo) with IRLS scores ranging from 2 (mild) to 33 (very severe). A significant main effect of group was observed (P_{Group}=0.003) after adjusting for confounding factors. The mean IRLS score was significantly lower in the TRF compared to the placebo group beginning at 9-month of intervention. Greater reduction of RLS severity was also observed in the TRF group in the sensitivity analysis.

CONCLUSION

Daily supplementation with 300mg TRF ameliorates RLS severity in MHD patients, but a significant sustained benefit was only apparent after 6-9 months.

Category: Paramedic

Topic: Hemodialysis

Session: Oral + E-Poster Display

Submission ID: 49

Abstract ID: MSN2023-OP18

CURRENT MANAGEMENT OF METABOLIC ACIDOSIS IN CHRONIC KIDNEY DISEASE PATIENTS IN MINISTRY OF HEALTH HOSPITALS

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INTRODUCTION

Metabolic acidosis is a known complication of chronic kidney disease (CKD) that has gained more attention recently due to the growing evidence of benefits in its treatment. The reported prevalence of metabolic acidosis among CKD patients varies from 13-80%. This study aims to provide some baseline data as there is limited information on the prevalence and management of this condition in the Malaysian CKD population.

METHODS

This was a cross-sectional retrospective study conducted in three government hospitals in Malaysia. Pre-dialysis CKD patients above 18 years old on regular Nephrology Clinic follow up between 1 October to 31 December 2021 were included in this study via convenience sampling. Demographic characteristics, clinical information, laboratory data and concomitant medications were obtained from clinic cards or electronic medical records.

RESULTS

A total of 657 patients were identified with the majority having Stage 5 CKD (n=328, 49.9%). Bicarbonate levels were only available for 40.3% of the patients (n=265). The final study population of 259 patients included in the analysis had a median age of 62 years (interquartile range [IQR], 19 years) and a median eGFR of 12.6

ml/min/1.73m² (IQR, 9.7 ml/min/1.73m²). The mean bicarbonate level measured was 19.0 (standard deviation [SD], 3.8) mmol/L. The overall prevalence of metabolic acidosis was high (n=223, 86.1%) and less than half of the patients were on alkali therapy. Only 19.8% (n=19) of those on alkali therapy achieved targeted bicarbonate level of ≥ 22 mmol/L.

CONCLUSION

The prevalence of metabolic acidosis is high in this study population but the bicarbonate monitoring rate, treatment rate and percentage of patients achieving targeted bicarbonate levels are low. Future studies should explore strategies to promote bicarbonate monitoring and discover ways to increase adherence or optimisation of alkali therapy in order to correct the metabolic acidosis which can potentially improve outcome in the CKD population.

Category: Paramedic

Topic: Others

Session: Oral + E-Poster Display

Submission ID: 121

Abstract ID: MSN2023-OP19

INFLAMMATORY MARKERS AS PROGNOSTIC INDICATORS FOR RAPID KIDNEY FUNCTION DECLINE IN PATIENTS WITH DIABETIC KIDNEY DISEASE: A SINGLE-CENTRE EXPERIENCE

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INTRODUCTION

The worldwide prevalence of end-stage kidney disease (ESKD) is primarily caused by diabetic kidney disease (DKD). It is now recognised chronic, low-level inflammation plays an important role on the pathogenesis of DKD. Our research aims to evaluate the potential effects of neutrophil to lymphocyte ratio (NLR) and platelet to lymphocyte ratio (PLR) in a specific subset of DKD patients based on specificity (SP) and sensitivity (SN) experiencing rapid kidney function decline (RKFD).

METHODS

A 92 patients were recruited with the follow up more of than 6 months in Serdang Hospital from April 2021 until July 2022. A cut-off value of NLR and PLR were utilized to evaluate the predictive value and the accuracy of these inflammatory markers with the rapid renal outcome. The primary outcomes of this study were defined as the rapid decline of renal function, characterized by doubling of serum creatinine (DSC), renal decline exceeding 5 mL/min/year, and 10 mL/min/year. The statistical software SPSS

version 27 was employed, and a significance level of $P < 0.05$ was considered statistically significant.

RESULTS

The baseline demographic and parameters i.e., Male (65.2%), Malay (56.5%), age 60.35 ± 13.73 , serum albumin 33.01 ± 8.98 g/L eGFR 38.00 ± 22.04 ml/min/ 1.73 m², serum creatinine 247.45 ± 148.09 μ mol/L, uPCI g/day 4.268 ± 5.29 , NLR 2.96 ± 1.82 , PLR 136.48 ± 57.77 . Out of 92 patients 31 patients were identify associated with DSC with the specificity and sensitivity (NLR with a cut off > 1.09 [SP=96.8% and SN=98.4% with area under curve (AUC) of 0.641] and [PLR with a cut off > 66.97 [SP=96.8% and SN=93.4% with AUC of 0.637]. 34 patients on > 5 ml/min/year (NLR with a cut off > 1.47 [SP=91.2% and SN=87.7% with AUC of 0.56] and [PLR with a cut 69.86 [SP=91.2% and SN=93% with AUC of 0.483]. 24 patients on > 10 ml/min/year (NLR with a cut off > 1.47 [SP=91.7% and SN=86.6% with AUC of 0.572] and [PLR with a cut 81.45 [SP=91.7% and SN=82.1% with AUC of 0.518].

CONCLUSION

Our study showed that elevated values inflammatory markers, namely NLR and PLR are adversely associated with rapid decline of kidney function in DKD. However, the AUC showed an excellent to poor discrimination on the SP and SN test depending on the outcome. A further analysis with a larger sample size is needed to enhance the accuracy of the inflammatory markers as prognostic markers to improve the management of DKD.

Category: Paramedic

Topic: Others

Session: Oral + E-Poster Display

Submission ID: 96

Abstract ID: MSN2023-OP20

PREDICTIVE VALUE OF HIGH SERUM TNF RECEPTOR 1 FOR RENAL FUNCTION DECLINE IN PATIENTS WITH DIABETIC KIDNEY DISEASE: A PROSPECTIVE COHORT STUDY

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INTRODUCTION

Diabetic kidney disease (DKD) has emerged as a growing global health concern and a significant cause of morbidity and mortality in individuals with diabetes mellitus. This progressive condition is characterized by a decline in kidney function, leading to end-stage kidney disease (ESKD) in severe cases. Emerging research suggests that pro-inflammatory cytokines, such as tumour necrosis factor receptor 1 (TNFR1), play a pivotal role in the pathogenesis of DKD. Despite the growing evidence implicating TNFR1 in the pathogenesis of DKD, the role of serum TNFR1 levels in predicting the progression of renal dysfunction remains unclear. Therefore, the present study seeks to elucidate the association between elevated serum TNFR1 levels and the rapid deterioration of kidney function in patients with DKD.

METHODS

A 92 patients were recruited with the follow up more of than 6 months in Serdang Hospital from April 2021 until July 2022. A cut-off value of sTNFR1 from range 2900 pg/mL and above was utilized to evaluate its association with baseline demographics and rapid renal outcome. The primary outcomes of this study were defined as

the rapid decline of renal function, characterized by doubling of serum creatinine, renal decline exceeding 5 mL/min/year, and 10 mL/min/year. The statistical software SPSS version 27 was employed, and a significance level of $P < 0.05$ was considered statistically significant.

RESULTS

A 68 patients with high level sTNFR1 > 2900 pg/mL was reported. The baseline parameters i.e., age 60.35 ± 13.73 , serum albumin 33.01 ± 8.98 g/L eGFR 38.00 ± 22.04 ml/min/ 1.73 m², serum creatinine 247.45 ± 148.09 μ mol/L, uPCI g/day 4.268 ± 5.29 , sTNFR 4394.03 ± 1960.06 pg/mL. There were significant association of high sTNFR1 range from 2900 pg/mL with age > 45 years old ($p=0.009$ OR= 1.462 [1.255-1.703], hypoalbuminemia ($p= 0.001$), proteinuria > 1 g/day (uPCI) ($p < 0.001$), and rapid deterioration of kidney functions i.e., doubling of serum creatinine ($p=0.012$, OR=4.9 [1.33-18.02]), renal decline exceedingly more than 10 mL/min/year ($p=0.016$, OR= 0.285 [0.104-0.778] and 5mL/min/year ($p=0.05$, OR= 0.386 [0.149-1.003]).

CONCLUSION

Study has shown that elevated serum levels of TNFR1 from 2900 pg/mL and above are associated with a higher risk of rapid deterioration of kidney function in patients with DKD. This finding has important clinical implications, as early identification of patients at risk for progression of kidney disease is crucial for the implementation of appropriate interventions to prevent or delay the onset of end-stage kidney disease. Study also suggests that sTNFR1 may be a useful prognostic biomarker for predicting the progression of DKD, and further research with larger sample size is needed to explore its potential as a therapeutic target for this condition.

Category: Paramedic

Topic: Others

Session: Oral + E-Poster Display

Submission ID: 95

Abstract ID: MSN2023-OP21



PRESCRIPTION BEHAVIOUR OF NEPHROTOXINS IN NEPHROLOGY OUTPATIENT CLINIC - A SINGLE TERTIARY CENTRE EXPERIENCE IN MALAYSIA.

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INTRODUCTION

Drug-induced nephrotoxicity (DIN) is increasingly recognised as a major contributor to chronic kidney disease (CKD). It has a wide spectrum of pathogenesis and may result in acute or chronic renal adverse effects. Proton-pump inhibitors (PPIs) and non-steroidal anti-inflammatory drugs (NSAIDs) are common nephrotoxic drugs. Hence, it is important to study the prescription behaviours in this context.

METHODS

This is a single centre, retrospective observational study of patients who attended nephrology outpatient clinic, Hospital Serdang, from 1st Jan – 31st Jan 2023. The study cohort will be divided into nephrotoxin vs non nephrotoxin group. Their demographic data, biochemical results and medication lists were reviewed from the electronic health record system (eHIS). Data is analysed using SPSS version 25.

RESULTS

A total of 310 patients attended the clinic with the mean age of 64.5 years, majority are male (n: 190) and Malays (n: 189) followed by Chinese (n:78) and Indian (n:40). They are mainly hypertensive (n: 281) and at CKD stage 3b (n:99), followed by stage 4 (n:95) and stage 3a (n:51). A total of 55 patients (17.7%) were prescribed with PPIs in which 15% of them were without a clear indication for use. PPIs prescription by nephrology unit is at 34.5% in which 21% without

a clear indication. The mean duration of PPIs use was 193 days. There is no significant difference in term of patients' age, serum creatinine, eGFR and stage of CKD. Of note, there was only 1 patient prescribed with NSAIDs.

CONCLUSION

This study highlights the need for judicious medication prescription for patients as >10% has no clear indication of medication use. A further study to look at the long-term renal adverse effect and potential cost saving benefits from appropriate medication used is very much warranted.

Category: Paramedic

Topic: Others

Session: Oral + E-Poster Display

Submission ID: 111

Abstract ID: MSN2023-OP22



DOES DAYCARE PERITONEAL DIALYSIS TRAINING PROGRAM ASSOCIATED BETTER OUTCOME

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INTRODUCTION

Since the beginning of PD Program in Hospital Tengku Ampuan Rahimah, Klang, PD training has been done as inpatient. Since the pandemic Covid-19 infection, we have restructured PD training program to allow new PD patients to complete PD training as daycare procedure mainly to reduce hospitalization. Hence, we would like to look at the difference in outcome comparing inpatient PD training versus daycare training.

METHODS

This is a retrospective observational study reviewing baseline demographic, laboratory data and outcome such as technique survival, peritonitis rate, exit site infection and hospitalization following 6 months PD training in incident PD patients from 1st Jan 2019 to 30th April 2022.

RESULTS

A total 206 patients were reviewed, 114 (55.3%) patients had inpatient PD training while 92 (44.7%) patients had daycare PD training. About 49 (43%) patients were assisted with inpatient PD training while 36 (39.1%) were assisted daycare PD training patients, $p=0.34$. A total 63 (55.3%) were male in inpatient group while 57 (62%) were male in daycare group, $p=0.20$. The mean baseline creatinine in inpatient group was 841.9 (325.7) $\mu\text{mol/L}$ while 923 (379.7) $\mu\text{mol/L}$ in daycare group, $p=0.04$. There was no significant difference between hemoglobin level, calcium, phosphate and albumin level between these two groups. After 6 months PD training, technique survival for inpatient was 100 (87.7%) while daycare group 77 (83.7%), $p=0.67$. Peritonitis was 13 (11.4%) in inpatient group versus 15

(16.3%), $p=0.18$ while exit site infection was 1(0.9%) in inpatient group versus 3 (3.3%) in daycare group, $p=0.22$. Hospitalization was 48 (42.1%) inpatient group versus 44 (47.8%) in daycare group, $p=0.24$.

CONCLUSION

No significant difference in outcome following inpatient PD training versus daycare PD training was observed in this study. We recommend Daycare PD training as a viable option to reduce hospitalization.

Category: Paramedic

Topic: Peritoneal Dialysis

Session: Oral + E-Poster Display

Submission ID: 123

Abstract ID: MSN2023-OP23

THE IMPACT OF COVID-19 PANDEMIC ON THE RENAL ANAEMIA MANAGEMENT IN CONTINUOUS AMBULATORY PERITONEAL DIALYSIS (CAPD) PATIENTS IN HOSPITAL SERDANG: A SINGLE TERTIARY CENTRE STUDY IN MALAYSIA

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INTRODUCTION

In March 2020, Malaysia had announced a full pandemic lockdown after the outbreak of COVID-19. People with chronic health conditions might have limited access to the healthcare system and even to health supplies such as medicines. There is a probability that CAPD patients who are receiving erythropoiesis stimulating agents (ESAs) couldn't visit the hospital for their regular follow up or monthly medication collection, hence affecting their renal anaemia treatment.

METHODS

This is a single centre, retrospective cross-sectional study which evaluate the impact of COVID-19 pandemic on the anaemia management of CAPD patients who receiving ESA treatment in Hospital Serdang between March 2019 to February 2021. The objectives are to compare the hemoglobin level and the iron status of CAPD patients pre and during COVID-19 pandemic, as well as to identify the patients' adherence towards ESA medication collection date. Patients' demographic data, biochemical results and medication lists were reviewed from the electronic health record system (eHIS). Data is analysed using SPSS version 25.

RESULTS

A total of 197 CAPD patients with mean age of 51.3 years old were included in study. Majority are male (50.8%) and Malay (75.6%) followed by

Chinese (20.3%) and, Indian (4.1%). During Covid-19 pandemic period, the haemoglobin level increased from 9.79 g/dL to 10.12 g/dL ($p < 0.05$) whereas ferritin level improved from 628ng/mL to 734ng/mL ($p < 0.05$). There was a slight increment of Transferrin saturation (TSAT) level from 36.4% to 37.4% ($p > 0.05$). Approximately 72.1% of the patients had good levels of adherence towards their medications.

CONCLUSION

Despite the limitations of pandemic, the anaemia management can be adequately achieved and be comparable to the pre-pandemic period in CAPD patients who received ESA in Hospital Serdang. A further study on long-term of effect of the pandemic on anaemia management and patient outcome should be explored.

Category: Paramedic

Topic: Peritoneal Dialysis

Session: Oral + E-Poster Display

Submission ID: 118

Abstract ID: MSN2023-OP24

UNRAVELING ACUTE KIDNEY INJURY IN COVID-19: RISK FACTORS, THERAPEUTIC SOLUTIONS, AND CLINICAL IMPACTS

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INTRODUCTION

COVID-19, a widespread pandemic, primarily impacts the respiratory system but can also lead to multiorgan complications, such as AKI. The prevalence and specific local occurrence of AKI in COVID-19 patients remain under-documented. This study investigated the contributing factors, in-hospital outcomes, and discharge outcomes for COVID-19 patients with AKI in our local healthcare setting to better understand the implications and clinical management of this condition.

METHODS

This retrospective study analyzed 256 COVID-19 patients with AKI admitted to Hospital Sultan Abdul Aziz Shah UPM from January to December 2021. Data from medical records included sociodemographic background, comorbidities, risk factors, diagnosis, investigations, interventions, and inpatient outcomes. AKI definition and staging followed the Kidney Disease Improving Global Outcomes criteria. Statistical analysis assessed prevalence, risk factors, and discharge outcomes.

RESULTS

The mean age of the patients was 54.1 years, and 78.5% were males. The most frequent comorbidities observed were hypertension (51.2%), diabetes mellitus (44.1%), and chronic kidney disease (11.7%). The proportions of patients within each AKI stage (1, 2, and 3) were 179 (69.9%), 20 (7.8%), and 57 (22.3%),

respectively. Complete renal improvement was observed in 191 patients (74.6%), while partial or no recovery was recorded in 65 patients (25.4%) at discharge. Renal outcomes were worse in patients with AKI stage 3. The overall in-hospital mortality rate for the 49 patients with AKI was 19.1%, with all-cause mortality seen in COVID-19 categories 4 and 5 and a high Charlson Comorbidity Index. The usage of cytokine absorbing filter may improve outcome.

CONCLUSION

A multitude of risk factors may contribute to the prevalence of AKI among COVID-19 patients, particularly those with a high comorbidity burden. These patients tend to present with more severe COVID-19 categories and ultimately more severe AKI KDIGO classifications as well. Mortality can reach up to 19.1% among these patients.

Category: Doctor

Topic: COVID-19

Session: E-Poster Walkabout + Display

Submission ID: 59

Abstract ID: MSN2023-PW01



IS POSITIVITY OF SERUM EXTRACTABLE NUCLEAR ANTIGEN (ENA) ASSOCIATED WITH THE DEVELOPMENT OF LUPUS NEPHRITIS (LN)?

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INTRODUCTION

Systemic lupus erythematosus (SLE) is a chronic autoimmune disease distinguished by a wide spectrum of heterogenous clinical manifestations and autoantibodies, including ENA and anti-dsDNA. The objective of this study is to determine the association of serum ENA with presence of LN.

METHODS

The study retrospectively reviewed all medical records of 818 SLE patients who were followed up at Hospital Sultan Ismail, Johor Bahru, Malaysia from January 2006 to December 2021. The inclusion criteria are: (1) age ≥ 12 years old, (2) fulfilled either ACR(1997)/SLICC(2012)/EULAR/ACR(2019). In this study, LN is defined as: (1) biopsy-proven lupus nephritis, (2) Urine protein-creatinine ratio $>500\text{mg/g}$, (3) urine dipstick protein 1+ with specific gravity of <1.020 or 2+ at any specific gravity. ENAs are being considered positive if any of the following are positive: anti-SM, anti-RO, anti-LA, U1RNP, anti-nucleosome, anti-SCL-70, anti-KU, anti-JO1 or anti-centromere. The data was analyzed using independent Chi-square analysis.

RESULTS

There were 790 patients included in the study. 93.8%(741/790) were female. Majority were Malays 50.1%, followed by Chinese 40.8%, Indian 7.2% and others 1.9%. Mean age of the study population was 29.25 years old. The incidence of LN among the study population was

58.9%. Our study showed there is a significant association between positive serum ENA and LN ($p=0.006$). Relative risk of developing LN is 1.176 higher in ENA positive compared to ENA negative. From this study, presence of anti-dsDNA was also significantly associated with LN ($p<0.001$).

CONCLUSION

This study showed there was significant association between the presence of serum ENA or anti-dsDNA with the occurrence of lupus nephritis among SLE patients in our center. Whether negativity of serum ENA is protective against LN requires further study.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Walkabout + Display

Submission ID: 35

Abstract ID: MSN2023-PW02

SPECTRUM OF GLOMERULAR DISEASE AND OBESITY IN A TERTIARY HOSPITAL IN MALAYSIA

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INTRODUCTION

Obesity rate in Malaysia is at 19.7% and expected to double in twelve years despite being a preventable disease. With the rising trend of obesity, this can lead to serious health consequences including CKD and mortality. Obesity is usually associated with Focal Segmental Glomerulosclerosis (FSGS). However, there may be other emerging type of glomerulonephritis associated with obesity. The spectrum of histopathological findings in obese and non-obese patient may be similar. Awareness in emerging types of glomerulonephritis will ensure accurate diagnosis and treatment.

METHODS

This is a retrospective study of 76 patients that underwent renal biopsy in Nephrology Ward Hospital Serdang from 1st January 2022 to 31st December 2022. Database is collected from Electronic Health Information System 12.14.3 and further analysed by SPSS Statistic 27.0. Obese is defined as BMI more than 25kg/m² as per Asia-Pacific classification.

RESULTS

60.5% of obese and 39.5% of non-obese patients underwent renal biopsy. From the biopsy report of obese patient, 21.7% were IgA Nephropathy, 17.4% were Diabetic Nephropathy and 15.2% were FSGS. In the 39.5% of non-obese patient, 33.3% were Lupus Nephritis, 26.7% were IgA Nephropathy and 16.7% were FSGS. Chi Square Test comparing both cohort shows P value of 0.257.

CONCLUSION

From our cohort, obesity is not mainly associated with FSGS. Renal histopathological from our obese cohort were mostly IgA Nephropathy. There are similar histopathological findings between two cohort. IgA Nephropathy is the most prevalence glomerulonephritis worldwide. As of latest literature, there are no study in association of obesity and IgA Nephropathy. Obesity may be an independent risk factor in developing IgA Nephropathy. Newly emerging treatment such as targeted release budesonide or SGLT-2 may indirectly worsened or improved obesity and underlying IgA Nephropathy progression. Further research is necessary to find the perfect balance in treatment and obesity.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Walkabout + Display

Submission ID: 144

Abstract ID: MSN2023-PW03

EFFECT OF MEDIUM CUT OFF (MCO) DIALYZER ON QUALITY OF LIFE (QOL) OF HEMODIALYSIS PATIENTS IN A SINGLE CENTER

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INTRODUCTION

Middle molecules are characterized by a molecular weight >500 kilodalton(kDa) which accumulates in ESRD which associated with the development of chronic inflammatory disease, cardiovascular disease, chronic kidney disease–mineral and bone disorder (CKD-MBD), amyloidosis and protein-energy wasting. Medium cut-off (MCO) membranes provide diffusive and convective removal of solutes of molecular weight up to 45 kDa, with only marginal albumin loss. Questionnaire from London Evaluation of Illness (LEVIL) used to assess the effects of MCO dialyzer on QoL of patient symptoms.

METHODS

Cross-sectional study at a tertiary care hospital's Hemodialysis Unit (Hospital Sultanah Nur Zahirah) targeted to ESRD patients using MCO dialyzer more than 3 months duration.

RESULTS

Total patients on MCO dialyzer were eight, however one person demised due to complicated pulmonary tuberculosis (PTB). Duration of usage of MCO dialyzer was minimum of 3 months with 75 % using more than 12 months. The mean hemodialysis duration was 13.7 years with longest duration of 23 years. Albumin levels noted 0.3-4.9% fluctuation from baseline with no significant differences in mean albumin level. Complications such as hypotension , infection and hospitalization not observed among our patients except for the PTB patient. Hemodialysis adequacy was optimum based on their kt/V and achievement of dry weight. Based on QoL questionnaire, our patients showed 15.6% reduction in body itchiness, with improvement in

energy level and sleep quality by 26.0% and 24.6% respectively. Patients claimed betterment of bodily pain and restless leg by 30.8% especially muscle soreness. Recovery from dialysis been shortened less than 12 hours by 133% with daily activities betterment by 22.6% .

CONCLUSION

Overall general wellbeing of these patients improved by 71.4% especially muscle soreness and recovery time without significant loss of serum albumin. These results encourage further studies with larger sample size and longer study periods.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Walkabout + Display

Submission ID: 87

Abstract ID: MSN2023-PW04

ENHANCING RENAL REPLACEMENT THERAPY OUTCOMES THROUGH VASCULAR ACCESS INTERVENTION: THE IMPERATIVE ROLE OF INTERVENTIONAL NEPHROLOGISTS IN MALAYSIA

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INTRODUCTION

Vascular access (VA) therapies include pre-creation vessel assessment, arterio-venous fistula (AVF) creation, diagnostic evaluation of problematic dialysis access, and percutaneous transluminal procedures by multidisciplinary surgeons and interventional radiologists (PTA). The rise of ESKD incidence, the demand for VA intervention has outpaced the supply, posing difficulties in managing vascular access. Interventional nephrologists (IN) play a pivotal role in tackling this issue and bolstering current multidisciplinary teams. This study aims to determine the safety and efficacy of interventional nephrologists in managing vascular access in Malaysia.

METHODS

Between January 2023 and April 2023, a retrospective study was done on ESKD patients who underwent VA procedures by IN in Hospital Sultan Abdul Aziz Shah. Demographic, clinical, and interventional information was extracted from the medical records of patients. Procedures and complication rates were evaluated as outcomes.

RESULTS

Ninety-one VA procedures were done which included 37 vessel pre-assessments, 10 fistulograms, 8 centrovenograms, 6 angioplasties, 4 catheter modifications, and 26 permcath insertions. IN's pre-assessments significantly influenced the success of vascular access creation, accounting for 15 of 28 successful

procedures. Initial diagnoses were revised in 13 instances due to factors such as recent blood taking, calcified arteries, and unclear reasons.

Eight of the fistulogram cases exhibited stenosis, while 2 were normal; 5 of the stenosed patients underwent successful angioplasties, while 3 exhibited full thrombosis. Two centrovenogram were diagnosed with stenosis, 6 were patent, and only one resulted in a successful angioplasty. Four patients received catheter adjustments to enhance the functionality. Twenty-four of the twenty-six had successful permcath insertion, while 2 suffered complications: hematoma and catheter-related bloodstream infection.

CONCLUSION

Interventional nephrologists play a vital role in managing vascular access for hemodialysis patients, successfully performing various VA procedures. Despite occasional complications, the overall positive outcomes demonstrate the importance of incorporating interventional nephrologists in the multidisciplinary care of patients with end-stage renal disease.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Walkabout + Display

Submission ID: 64

Abstract ID: MSN2023-PW05

SURVIVAL OF BRIDGING HEMODIALYSIS IN PATIENTS WITH END-STAGE RENAL DISEASE IN KELANTAN

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INTRODUCTION

Bridging hemodialysis (HD) is an important role in providing temporary Renal Replacement Therapy (RRT). In our centre, bridging HD is commenced from weekly to 2-weekly intervals after the insertion of a central catheter until a definitive RRT is established. Therefore, our objective was to investigate the survival of bridging HD in patients with end-stage renal disease (ESRD) in Kelantan.

METHODS

This is a cross-sectional study, included ESRD patients who underwent bridging HD from January 2016 - December 2020. Kaplan-Meier and Cox-Regression were performed for survival analysis using SPSS version 26. An event was defined as death. The ethics approval was obtained from the Medical Research & Ethics Committee (MREC), Ministry of Health (MOH).

RESULTS

Over the study period, there were 253 patients; 211 received RRT and 42 were death due to sepsis, cardiac event, GI bleeding, ESRD related, and unknown. The overall survival at 3, 6 and 12 months was 91.5%, 85.5% and 68.5%, respectively. The overall mean survival was 10.5 months. For patients presented as crash landers, the survival at 3, 6 and 12 months was 89.6%, 80.8% and 57.2%, respectively. Patients presented as non-crash landers, the survival at 3,

6 and 12 months was 95.0% for all durations. Therefore, patients presented with non-crash landers had better survival compared to a patient presented with crash landers (P=0.001). Among patients who had tunnel HD, the survival at 3, 6 and 12 months was 93.8%, 93.8% and 46.9%, respectively. For patients who had non-tunnel HD, the survival at 3, 6 and 12 months was 91.3%, 85.0% and 69.1%, respectively. The survival distributions for these two interventions were not statistically significant (P=0.662).

CONCLUSION

Patients presented with non-crash landers had better survival compared to patients presented with crash landers. Bridging HD provides an alternative option of dialysis before establishing definitive RRT, especially in a resource-limited setting.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Walkabout + Display

Submission ID: 102

Abstract ID: MSN2023-PW07

VASCULAR ACCESS TRENDS AND OUTCOMES IN INCIDENT HAEMODIALYSIS PATIENTS IN KINTA VALLEY

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INTRODUCTION

The epidemiology and outcomes of vascular access in patients initiating hemodialysis have not been described locally. Our study is on the epidemiology and outcomes of vascular access in incident haemodialysis patients in Kinta Valley.

METHODS

This is a retrospective observational study. 23 centres participated voluntarily. All new End Stage Kidney Disease (ESKD) patients who started haemodialysis from October 1, 2021, until September 30, 2022, were identified. Demographic and clinical data were collected, including outcomes within 6 months of HD initiation.

RESULTS

207 patients initiated haemodialysis during the 1-year study period. 39.1% had functional arteriovenous fistulas (AVF), and 60.9% used temporary dialysis catheters as vascular access at time of initiation. Haemodialysis patients are statistically more likely to initiate HD with an AVF if they were under civil service sponsorship (46% vs. 33.3%, $p = 0.039$). Pre-dialysis care at a non-MOH facility or MOH facility made no difference in terms of type of access at hemodialysis initiation (51% vs. 38.3%, $p = 0.136$). 75.3% of patients who initiated HD via dialysis catheter had a functional AVF created by 6 months, though patients with or without civil service sponsorship made no difference in this (68.1% vs. 79.2%, $p = 0.168$). At 6 months, mortality (7.1% vs. 4.9%, $p = 0.523$) and hospitalisations (30.9% vs. 19.7%, $p = 0.075$) were numerically higher in patients initiating HD

using temporary dialysis catheters but were not statistically significant. Temporary dialysis catheter-related complication rates over 6 months were: catheter-related blood stream infection, catheter dysfunction, and dislodged catheter at 14.2%, 13.4%, and 3.9%, respectively. AVF-related complication rates were infection and primary failure at 2.4% and 9.8%, respectively.

CONCLUSION

Continuous efforts to prepare a functional AVF prior to initiation of HD may lead to lesser hospitalisations and complications. Hence, concerted efforts need to be undertaken towards this goal.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Walkabout + Display

Submission ID: 171

Abstract ID: MSN2023-PW08

EMPLOYEMENT STATUS AND IT'S ASSOCIATED FACTORS IN CKD STAGE 4/5 NON-DIALYSIS

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INTRODUCTION

Chronic kidney disease (CKD) is a major public health issue with significant socioeconomic impacts especially in the developing countries. In Malaysia, the prevalence of CKD was 15% in 2018 and the number is still rising. Complications of CKD have led to frequent hospitalisations resulting in work disability and unemployment. Currently, there is no data of employment status of CKD patients in Malaysia.

METHODS

We conducted a cross-sectional study of advanced CKD (stage 4 and 5 non-dialysis) patients treated in our centre. We interviewed aged 18 to 60 years old, reviewed their employment status and associative factors (age, gender, weight, salary, and education level) as well as clinical parameters.

RESULTS

Among 302 patients recruited, 53.3% were males, with a mean age of 49±9 years old. The main cause of CKD was diabetes (67.2%) followed by hypertension (11.6%). Majority of them were obese (51.3%) based on WHO Asian classification with a mean body mass index of 29.21±9.67 kg/m². The mean household income was RM 4655.30 ± 3031.30. The employment rate was 49% (n=148). A total of 103/154 were unemployed either due to worsening CKD progression or diabetic complications, equally affecting those who worked in the private (41.88%) and government sectors (39.56%). 85% of the unemployed patients were B40. Male gender and tertiary level of education were the

significant factors that retain patients in employment with an adjusted odd ratio of 3.458 (1.627, 7.352), p = 0.001 and 3.709 (2.172, 6.336), p <0.001 respectively despite having underlying advanced CKD. On the other hand, old age is likely to be unemployed with an adjusted odd ratio of 0.909 (0.868, 0.952), p <0.001.

CONCLUSION

Half of the advanced CKD patients were unemployed due to disease burden. This raise the concern for financial support for long term renal replacement therapy.

Category: Doctor

Topic: Others

Session: E-Poster Walkabout + Display

Submission ID: 109

Abstract ID: MSN2023-PW09



PREVALENCE OF HIGH SENSITIVITY TROPONIN I AMONG THE ASYMPTOMATIC END STAGE RENAL DISEASES DIALYSIS PATIENTS

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INTRODUCTION

ESRD patients have a high risk of cardiovascular disease. hs-Trop I is a reliable biomarker for detecting heart damage. Elevated hs-Trop I levels are found in stable ESRD patients, but it is unclear what it means for asymptomatic dialysis patients.

METHODS

All ESRD patients on stable regular hemodialysis and peritoneal dialysis for more than three months were recruited. The blood sample for hs-Trop I was taken immediately before the hemodialysis treatment or scheduled visit for peritoneal dialysis patients. Elevated hs-Trop I is defined as more than > 30 ng/L for female and >56 ng/L for males. Those admitted for acute coronary syndrome, decompensated heart failure, sepsis requiring antibiotic therapy or any hospital admission for any cause six weeks before the study initiation and having angina symptoms during the dialysis treatment were excluded. Apart from that, those with elevated Troponin I were required further clinical assessment, repeated hs-Trop I, NT-proBNP and echocardiography assessment.

RESULTS

A total of 281 patients were enrolled in this study, with 240 patients ultimately considered eligible for further study. Among these patients, 8% (19) had

elevated hs-Trop I levels despite having no evidence of cardiac abnormalities. The median (interquartile range) of hs-Trop I among stable patients was 19.56ng/l (8.6-35) for those on peritoneal dialysis and 13.7ng/l (9.0-23.3) for those on hemodialysis. The P-value between these two groups was not significant ($p > 0.10$). However, the two-tailed Mann-Whitney test showed a significant difference in hs-Trop I levels between the asymptomatic dialysis group and healthy controls, with a p-value of < 0.001 , indicating that stable dialysis patients had significantly higher hs-Trop I levels. The hs-Trop I values before and after hemodialysis were not significant, with a p-value of > 0.05 .

CONCLUSION

In this study, 281 patients were enrolled, with 240 eligible for further study. 8% had elevated hs-Trop I levels with no cardiac abnormalities. Median hs-Trop I levels for stable patients were 19.56ng/l (8.6-35) for peritoneal dialysis and 13.7ng/l (9.0-23.3) for hemodialysis. The difference between the two was not significant. However, a significant difference was observed between asymptomatic dialysis patients and healthy controls ($p < 0.001$). hs-Trop I levels before and after hemodialysis were not significant ($p > 0.05$).

Category: Doctor

Topic: Others

Session: E-Poster Walkabout + Display

Submission ID: 90

Abstract ID: MSN2023-PW10

SODIUM-GLUCOSE COTRANSPORTER-2 INHIBITORS UTILIZATION AND OUTCOMES IN PATIENTS WITH CHRONIC KIDNEY DISEASE AT A TERTIARY CENTRE

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INTRODUCTION

Sodium-glucose cotransporter-2 (SGLT2) inhibitor is an oral antidiabetic agent with cardiac and renal protective properties. It reduces the intraglomerular pressure through the tubuloglomerular feedback due to the high intratubular sodium from the inhibition of sodium reabsorption. The use of SGLT2 inhibitor in chronic kidney disease (CKD) independent of diabetic status is emerging. However, the real-world data of SGLT2 inhibitor utilization in CKD is limited worldwide, and none in Malaysia.

METHODS

We conducted a descriptive study of patients with CKD, who were prescribed with SGLT2 inhibitor in our Nephrology clinic. We aimed to review the baseline characteristics, and to compare the renal function and proteinuria prior to, and after the initiation of SGLT2 inhibitor.

RESULTS

156 patients were initiated on SGLT2 inhibitor from 2017 to 2022. Among them, 58.3% were male, with a mean age of 61±13 years, and 86.5% had diabetes mellitus, with mean estimated glomerular filtration rate (eGFR) of 46.41±21.14 ml/min/1.73m², and proteinuria of 2.22±2.62 g/day. 85.9% of patients were on renin-angiotensin-system (RAS) blockers, those who were not prescribed were mostly CKD stage 4. Among the non-diabetic patients, 81% had glomerulonephritis, half of which was IgA nephropathy, and 42.9% were on immunosuppressants. There was a significant

retardation of eGFR decline over a six-month-duration prior to and after the initiation of SGLT2 inhibitor from -3.46±6.56 ml/min/1.73m² to -0.77±7.97 ml/min/1.73m² with a p-value of 0.001. The eGFR decline retardation is more pronounced in more advanced CKD stages. However, the proteinuria reduction was insignificant over a six-month-duration (-0.03±2.31 g/day). There were no adverse events reported.

CONCLUSION

The prescription of SGLT2 inhibitor in CKD patients has increased owing to the evidence from recent clinical trials. In short-term, SGLT2 inhibitor retards the eGFR decline with minimal proteinuria reduction. Nonetheless, long-term efficacy and safety data of SGLT2 inhibitor in local populations requires further evaluation.

Category: Doctor

Topic: Others

Session: E-Poster Walkabout + Display

Submission ID: 26

Abstract ID: MSN2023-PW11



THE DEVELOPMENT AND PILOT TESTING OF CKD-CHECK TOOLKIT TO IMPROVE PRIMARY CARE DOCTORS' PRACTICE IN DETECTING CHRONIC KIDNEY DISEASE RAPID PROGRESSORS AND ITS MANAGEMENT

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INTRODUCTION

Chronic kidney disease (CKD) rapid progression is associated with higher dialysis requirements and mortality. However, eGFR progression varies and early detection is limited. This study aimed to develop and evaluate the 'CKD-CHECK toolkit': a tool to identify CKD rapid progression, facilitate further testing and appropriate nephrology referral.

METHODS

Chronic kidney disease (CKD) rapid progression is associated with higher dialysis requirements and mortality. However, eGFR progression varies and early detection is limited. This study aimed to develop and evaluate the 'CKD-CHECK toolkit': a tool to identify CKD rapid progression, facilitate further testing and appropriate nephrology referral.

RESULTS

A total of 25 doctors participated in the study with identification of 60 patients each in the control and intervention group. At baseline, the numbers of CKD rapid progressors were similar for both groups, with no significant differences in patients' sociodemographic and clinical characteristics, except more patients with ischemic heart disease ($p=0.001$) and used beta blockers ($p=0.005$) were in the intervention group. Comparing doctors'

practice pre and post intervention, more patients in the intervention group were referred to a nephrologist ($p=0.033$). Large proportion (88%) of CKD rapid progressors in the control group were not referred to nephrologists.

CONCLUSION

Using the CKD-CHECK toolkit improved the detection and referral of rapid CKD progressors in primary care to nephrologists.

Category: Doctor

Topic: Others

Session: E-Poster Walkabout + Display

Submission ID: 85

Abstract ID: MSN2023-PW13



MONOCYTE/ LYMPHOCYTE RATIO AND OUTCOME IN PERITONEAL DIALYSIS

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INTRODUCTION

Blood assay monocyte-lymphocyte ratio (MLR) is one of reproducible markers for systemic inflammatory response that has a potential to predict cardiovascular (CV) disease and outcome in peritoneal dialysis (PD) patients. In this study, we aim to look for an association between blood assay MLR and outcome such as PD technique survival, CV events and peritonitis after 6 month of PD treatment.

METHODS

This was a retrospective observational study involving all incident PD patients from 1st January 2020 to 31st December 2021. The baseline blood MLR from first pre-PD treatment was calculated and divided into low MLR (<0.29), middle MLR (0.29-0.45) and high MLR (>0.45). We look for any association between low, middle and high MLR with PD outcome following 6 months after starting PD therapy.

RESULTS

A total of 134 incident PD patients were reviewed in which 120 (89.6%) were on CAPD while 14 (10.4%) were on APD. The primary cause of ESKD was diabetes mellitus with 79 patients (59%), hypertension with 36 patients (26.9%) and glomerulonephritis with 14 patients (10.4%). There were 38 patients (28.4%) in the low MLR, 46 patients (34.3%) in the middle MLR and 50 patients (37.3%) in the high MLR group. The CV event occurrence in low MLR was 0 (0%), 8 (17.4%) in middle MLR and 10 (20.0%) in high MLR, $p=0.017$. Peritonitis events in low MLR was 5 (13.2), 7 (15.2%) in middle MLR and 7(14.0%) in high MLR, $p=0.96$. Technique survival after 6 months was 36 (94.7%) in low MLR, 41(89.1%) in middle MLR and 39 (78.0%) in high MLR, $p=0.177$.

CONCLUSION

In this study, high MLR was associated with higher CV event in PD patients as compared to middle and low MLR. MLR can be used as inflammatory marker to predict CV events in PD patients.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Walkabout + Display

Submission ID: 152

Abstract ID: MSN2023-PW14



OUTCOMES OF CULTURE POSITIVE AND CULTURE NEGATIVE PERITONEAL DIALYSIS-RELATED PERITONITIS IN A TERTIARY HOSPITAL IN MALAYSIA – A ONE YEAR RETROSPECTIVE STUDY

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INTRODUCTION

Peritoneal dialysis-related peritonitis (PDRP) remains a dreaded complication among patients undergoing peritoneal dialysis (PD). Existing guidelines for culture negative peritonitis rate is 15%. We aimed to look into the culture negative and positive PDRP in our centre.

METHODS

This is a retrospective observational study involving all PDRP patients in Hospital Raja Permaisuri Bainun, Ipoh in the year 2021. Patients' demography, clinical presentations and outcomes were reviewed. Outcomes were followed up for a year.

RESULTS

A total of 73 patients with 101 episodes of PDRP were included. The culture negative rate was 34.7%. The baseline characteristics were similar between the culture negative and positive groups, with mean age of 56.3 ± 12.3 vs 54.3 ± 15.7 years, predominant female (60% vs 54.5%), diabetes mellitus as primary disease (71.4% vs 62.1%), assisted PD (68.6% vs 72.7%), and CAPD (82.9% vs 95.5%). Culture negative group had a longer PD vintage (24 vs 18 months), with higher proportion of peritonitis (25.7% vs 18.2%) and exit site infection (17.1% vs 13.6%) in the prior 3 months.

Majority of the culture negative PDRP patients were treated with intraperitoneal cloxacillin and ceftazidime for 2 weeks; whereas antibiotics were adjusted to the sensitivity results in the culture positive group.

In terms of outcomes, culture negative group had numerically higher relapse peritonitis (8.6% vs 0%) as compared to culture positive group. However, culture positive PDRP patients reported significant higher hospitalization (98.5% vs 85.7%, $p=0.01$), refractory peritonitis (43.8% vs 22.9%, $p=0.019$) and drop out rates (30.3% vs 2.9%, $p=0.001$) as compared to culture negative PDRP patients. The duration of hospitalization and mortality rates were otherwise similar, not affected by culture positivity.

CONCLUSION

Although our centre reported a high rate of culture negative PDRP, the patients' outcomes were not worst off. Efforts to improve the culture positive yield and patient outcomes should be implemented.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Walkabout + Display

Submission ID: 160

Abstract ID: MSN2023-PW15



PRE-PD PERITONITIS: A CRITICAL CHALLENGE IN PERITONEAL DIALYSIS

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INTRODUCTION

Peritoneal dialysis (PD) widely accepted as modality for renal replacement therapy. However, peritonitis remains a major cause of morbidity and technique failure in PD patients. The occurrence of peritonitis prior commencement of PD treatment, termed pre-PD peritonitis, has gained increasing attention. We aim to study the clinical characteristics, risk factors, and short-term outcomes associated with pre-PD peritonitis

METHODS

A retrospective review conducted on all PD catheter insertion done in Hospital Kuala Lumpur from January to December 2022. All patients must meet 2 out of 3 PD peritonitis criteria. The incidence of pre-PD peritonitis during this period was analysed, focusing on patient characteristics, risk factors, and outcomes at 3 months.

RESULTS

There were 146 PD catheter insertions in 2022. The incidence of pre-pd peritonitis was 19.8% (n=29), predominantly male patients, 79.3% (n=23). Mean age was 50.9 ± 12.3 years. Among 29 patients, 20 were diabetics (68.9%). Only 2 patients (6.8%) had ascites during the insertion. None of them had exit site infection. The average BMI for those who had pre-PD peritonitis was 23.9 ± 3.7 compared to those without 25.3 ± 5.3 , $p= 0.18$. Average break-in period for pre-PD peritonitis group was 10.8 ± 6.3 days compared to 11.9 ± 8.6 days in the non-pre-PD peritonitis group ($p=0.59$). All patients were treated with intraperitoneal antibiotics with 20 patients (68.9%) added on chemical peritonitis regimen. PD fluids culture of all patients were negative for bacterial, fungal and mycobacterium. Half of pre-pd peritonitis patient (52%) require hospitalisation

while on treatment. At 3 months post pre-PD peritonitis, 4 patients (12.4%) converted to hemodialysis. No death was recorded.

CONCLUSION

The identified short-term outcomes, including hospitalization and conversion to hemodialysis emphasize the seriousness of pre-PD peritonitis. Center-based continuous quality improvement and analysis should be conducted to identify the root cause and subsequently implement appropriate solution.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Walkabout + Display

Submission ID: 173

Abstract ID: MSN2023-PW16

PREVALENCE AND RISK FACTORS ASSOCIATED WITH PSYCHOLOGICAL DISTRESS AMONG CAREGIVERS OF REQUIRING ASSISTED PERITONEAL DIALYSIS, A MULTI-CENTER STUDY

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INTRODUCTION

Assisted peritoneal dialysis involving caregivers allow patients who are not fit for self-performing peritoneal dialysis and hemodialysis to undergo home based dialysis. This study is aimed to evaluate the prevalence and risk factors associated with psychological distress among caregivers.

METHODS

This is a multi-center, cross sectional observational study involving Hospital Sultanah Aminah Johor Bahru and Hospital Pakar Sultanah Fatimah Muar. The Depression Anxiety and Stress 21 scale (DASS-21) questionnaire was used to assess subjective depressive, stress and anxiety complaints (Normal, Mild, Moderate, Severe, Extremely Severe) in total of 91 eligible participants. Chi square test was used to compare prevalence of depression, anxiety and stress by demographic features. Severity of depression, stress, anxiety in DASS -21 was subcategorized to binary variable (Yes (Mild Level and Above), No (Normal)) for logistic regression analysis of risk factors of psychological distress.

RESULTS

The prevalence of depression, anxiety, and stress among caregivers were reported to be 25.3%, 26.4% and 15.4 % respectively. Majority of participants had mild depression 15.4% while 16.5% of participants had mild anxiety. Similarly, 9.9% of participants had mild stress. Only 3.3%

of participants had very severe depression and 2.2% of participants had very severe anxiety. None of our participants was reported to have very severe stress. Predominantly, most of the caregivers are female (71.4%). In our study population, there is no significant statistical significance between age, gender, education level, total household income, employment status and total duration of care with depression, anxiety, and stress among caregivers.

CONCLUSION

About one fourth of participants were found to be depressed, anxious and stressed. However, there is no significant risk factor identified relating to psychological distress among caregivers assisting peritoneal dialysis.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Walkabout + Display

Submission ID: 104

Abstract ID: MSN2023-PW17



UNSCHEDULED HOSPITAL ADMISSIONS FOR PATIENTS ON PERITONEAL DIALYSIS AND THEIR OUTCOME

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INTRODUCTION

Peritoneal dialysis (PD) was one of treatment modality for end stage renal disease. Unscheduled hospital admissions among peritoneal dialysis patient are not well studied in Malaysia. Therefore, we aim to study rate of unscheduled admissions and their outcome among PD patients in HSNI.

METHODS

This was a retrospective study. The data for patients who were on PD and admitted to Hospital Sultanah Nora Ismail from January 2021 until December 2021 were collected. Patients' demographic, factors associated with admissions and their outcome were recorded.

RESULTS

A total of 116 patients were enrolled into PD programme during the study period. The mean age of the patients were 54.11 ± 15.47 years old. Majority of them were in the age group 50-69 (n=56,48.2%). Among the study population, 51.7% were males. Most patients had hypertension (n=99,40.7%) followed by diabetes mellitus (n=70,28.8%). In this study population, majority had unscheduled admission (n=64,55.2%) with mean frequency of admission 2.06 ± 1.60 times. The mean days from the date of tenckhoff insertion to unscheduled admission were 113.5 ± 117.3 days. Most of them were admitted for PD related infection (n=28,43.8%), followed by fluid overload (n=19,29.7%). The PD technique survival among those who had unscheduled admission was 84.9% (n=45) while 11.3% (n=6) of them transferred to haemodialysis. Among patients who had unscheduled admission, the mortality rate was 17.2% (n=11); while the mortality rate for those who had never experience unscheduled admission was 5.8% (n=3).

Cardiovascular event remained the most common cause of death 50% (n=7).

CONCLUSION

Patients who experience unscheduled admission had higher mortality rate, with cardiovascular events remained the most common cause of death.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Walkabout + Display

Submission ID: 98

Abstract ID: MSN2023-PW18



ABO-INCOMPATIBLE KIDNEY TRANSPLANTATION IN HOSPITAL KUALA LUMPUR

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INTRODUCTION

ABO-incompatible (ABO-I) living donor kidney transplantation (LDKT) represents an important advancement in order to reduce waiting time for kidney transplantation. This is a crucial alternative, especially in Malaysia where the pool of cadaveric kidney transplant donor is limited.

METHODS

This is a retrospective analysis of a prospectively maintained database for patients who underwent ABO-I kidney transplantation in Hospital Kuala Lumpur from year 2012 to 2022. This study aims to analyse clinical characteristics of the recipients and desensitization protocols used.

RESULTS

46 patients underwent ABO-I kidney transplantation. Mean age was 38.1±11.2 years. 26 (56.5%) were male. 23 (50%) were spousal. The primary diseases were glomerular disease in 18 (39.1%), hypertension in 5 (10.9%), diabetic nephropathy in 2 (4.3%) and adult polycystic kidney disease in 1 (2.2%). Aetiology was unknown in 20 (43.5%).

12 (26.1%) did not require desensitization. Baseline anti-A/B iso-hemagglutinin titre was ≤1:16 in 15 (32.6%), between 1:32 to 1:128 in 23 (50%) and ≥1:256 in 6 (13.0%). Data was missing in 2 (4.3%).

23 (50%) received anti-CD20 antibody, 32 (69.6%) undergone an average 3.25 sessions of double filtration plasmapheresis, 10 (21.7%) had plasma exchange and 9 (19.6%) undergone immunoadsorption. All sessions of

plasmapheresis were followed by administration of Intravenous Immunoglobulin.

There was one post-operative death due to sepsis. A total of 5 had allograft loss. Two developed hyperacute rejection with immediate allograft loss. Two were due to recurrent IgA nephropathy. Another had graft nephrectomy due to severe antibody-mediated rejection (ABMR) with vascular rejection. Two patients had delayed graft function.

The incidences of rejection were cellular rejection (6.5%), ABMR (8.7%) and mixed (4.3%). Infections such as Cytomegalovirus infection (26.1%), urinary tract infection (23.9%) and BK viremia (21.7%) were also reported.

CONCLUSION

ABO-I LDKT using appropriate desensitization technique is a safe and valuable option, especially in Malaysia.

Category: Doctor

Topic: Transplant

Session: E-Poster Walkabout + Display

Submission ID: 155

Abstract ID: MSN2023-PW19



PREDICTORS OF KIDNEY FUNCTION AFTER DONOR NEPHRECTOMY

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¹HO

INTRODUCTION

After donor nephrectomy, the kidney function is partially compensated and is reported to be recovered 70-75% of its initial glomerular filtration rate (GFR). We aim to determine the risk factors associated with unfavorable kidney compensation after donor nephrectomy.

METHODS

All patients with complete data who underwent donor nephrectomy in our institution from 2011 to 2018 were included in the study. Demographic data including age, gender, BMI (body mass index), relationship with recipients and hypertension status were collected. Serum creatine level at pre-donation, week six and one-year post donation were collected. "Unfavorable kidney" compensation was defined as post-donation estimated-GFR (eGFR) at one year of < 70% of pre-donation eGFR. eGFR was calculated by the Chronic Kidney Disease Epidemiology Collaboration equation 2021.

RESULTS

A total of 115 donors were included. There were 45% male donor, 68.7% first- degree relatives, 28.7% spousal, 1.7% second- degree relatives and 0.9% unrelated donors. The mean age was 44.3± 9, mean body mass index was 24± 3.7 and 4.3% had hypertension.

The mean eGFR pre-donation was 101.3± 13.1. The eGFR dropped to 68± 14.8 ml/min/1.72m² (67% of pre-donation eGFR) at week six and increased to 71.1± 15.7 ml/min/1.72m² (70.4% of pre-donation eGFR) at one-year post-donation. Sixty percent of donors had unfavourable kidney compensation.

In the univariate and multivariate analysis, age, gender and eGFR compensation ratio at week six (ratio of eGFR at week six versus pre-donation)

was significantly associated with unfavourable kidney compensation with adjusted odds of 1.06, 5.22, and 0.85 respectively, p<0.05). Nevertheless, hypertension, BMI and pre-donation eGFR were not the risk factors associated with unfavorable kidney compensation.

CONCLUSION

In this single center study, increasing age, reduced compensation rate of kidney function at week six and male gender were independent risk factors of unfavorable kidney compensation post donor nephrectomy.

Category: Doctor

Topic: Transplant

Session: E-Poster Walkabout + Display

Submission ID: 179

Abstract ID: MSN2023-PW20

FSGS AND RENAL-LIMITED VASCULITIS IN THE WAKE OF COVID-19 IMMUNIZATION: A CASE REPORT

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INTRODUCTION

COVID-19 vaccine-associated glomerular diseases (CVAGD) have emerged following mRNA-based vaccinations, involving focal segmental glomerulosclerosis (FSGS) and de-novo ANCA-associated vasculitis. Immune dysregulation has been identified as a potential risk factor for the development of glomerulonephritis. We present a patient with underlying eczema who developed renal symptoms after receiving two doses of the COVID-19 vaccine.

CASE PRESENTATION

A 44-year-old woman with underlying eczema who experienced reduced effort tolerance, frothy urine, and constitutional symptoms after completing her second dose of the Pfizer-BioNTech COVID-19 vaccine. She exhibited increased serum creatinine levels (209 µmol/L from a baseline of 98 µmol/L), blood and protein in her urine, and a urine protein/creatinine index (UPCI) of 1.9 g/day. She tested positive for ANCA with a high anti-MPO titer (>200 U/ml). Renal biopsy revealed a diffuse sclerosing pattern with collapsing lesions and pauci-immune immunofluorescence studies, suggesting a burnt-out renal-limited vasculitis associated with MPO-ANCA.

The patient demonstrated a favorable clinical response after initiating prednisolone and cyclophosphamide for induction, followed by azathioprine for maintenance.

RESULTS

Recent studies have reported cases of CVAGD, including FSGS and de-novo ANCA-associated vasculitis, following mRNA-based COVID-19 vaccination. The exact mechanism behind these associations remains unclear, but it has been hypothesized that immune dysregulation could play a significant role. In this case, the patient had underlying eczema, which suggests a possible predisposition to immune dysregulation and those individuals with immune-mediated disorders may be at a higher risk of developing glomerulonephritis. However, the association between the COVID-19 vaccine and glomerular diseases may be coincidental, as glomerulonephritis can develop independently of vaccination.

CONCLUSION

Given the potential severity of these conditions, it is crucial to monitor and report any suspected cases of CVAGD to establish a better understanding of the risks involved. While, the relationship between mRNA-based COVID-19 vaccines and glomerular diseases is not yet fully understood, the potential association warrants further investigation.

Category: Doctor

Topic: COVID-19

Session: E-Poster Display

Submission ID: 51

Abstract ID: MSN2023-PD01



WHEN LISTERIA MEETS COVID-19: UNCOVERING AN UNLIKELY MASQUERADE IN A KIDNEY TRANSPLANT RECIPIENT WITH MENINGOENCEPHALITIS

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INTRODUCTION

Meningitis is a severe condition that can be difficult to diagnose in kidney transplant patients, particularly if they have COVID-19 infection. The overlapping symptoms can make it challenging to differentiate between the two conditions. Comorbidities increase the risk of severe illness and mortality, thus it's important to detect and distinguish them, especially in immunocompromised individuals.

CASE PRESENTATION

51-year-old Malay man underwent a kidney transplant in 2006 and later developed NODAT. Recently, he had an AKI-related graft biopsy that revealed early antibody-mediated rejection and was on high-dose immunosuppressants. He contracted COVID-19 infection after receiving high-dose immunosuppressants, and his condition worsened with delirium and neuropsychiatric symptoms. Initially, he was diagnosed with COVID-19 encephalitis and treated accordingly. However, subsequent diagnosis of *Listeria monocytogenes* meningitis based on the patient's clinical picture, lumbar puncture results, and imaging, including brain CT scans, serves as a sobering reminder of the potentially consequences of undiagnosed and untreated infections. The patient recovered after administration of Ampicillin and Gentamicin.

RESULTS

Immunocompromised patient increase *Listeria* meningoencephalitis/meningitis risk. Most

patients have fever, altered sensorium, and headache, while 20% have no meningeal signs. With fewer meningeal symptoms and lower CSF WBC and protein levels than other bacterial infections, 66% of CNS listeriosis patients reported negative CSF gram stains. Similarly, the COVID-19 infection ranged from asymptomatic to fatal, making diagnosis difficult. The challenges of managing suspected COVID-19 infection in the context of *Listeria* meningoencephalitis in immunocompromised patient and emphasizes the importance of correctly identifying the bacterial infection to prevent mortality.

CONCLUSION

Identifying meningitis in kidney transplant patients can be difficult, especially in the context of COVID-19 infection. Thus, accurate diagnosis and classification of the two diseases is crucial, especially in immunocompromised patients with several likely diagnoses. Regular infectious disease surveillance ensures that patients receive timely and appropriate treatment, reducing the risk of severe morbidity and mortality.

Category: Doctor

Topic: COVID-19

Session: E-Poster Display

Submission ID: 62

Abstract ID: MSN2023-PD02

A CASE REPORT OF CYANOTIC NEPHROPATHY IN PUTRAJAYA HOSPITAL, MALAYSIA

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INTRODUCTION

Congenital cyanotic heart disease (CCHD) has been associated with 30-50% secondary glomerulopathy known as cyanotic nephropathy (CN).

CASE PRESENTATION

A 16 year-old male with congenital pulmonary atresia had balloon atrial septostomy and Glenn's shunt done in year 2007 was referred to nephrology team in July 2022 for nephrotic syndrome. He presented with facial swelling, bilateral leg swelling and frothy urine. On examination, blood pressure:134/90 pulse rate:110bpm oxygen saturation:74%. He has central cyanosis, fingers clubbing, periorbital edema, bibasal crepitations, systolic murmur with bilateral lower leg edema.

Urinalysis revealed protein 4+, UPCI 832mg/mmol, albumin 24g/L, creatinine 42umol/L, hemoglobin 19.1g/dL with hematocrit 65.2%.

Patient has no clinical and biochemical improvement despite prednisolone, perindopril, and venesection. He has been in NYHA class III over past 8-months with ejection fraction 20% on echocardiography in July 2022. Advance care planning (ACP) held and decided for best supportive care. Patient succumbed peacefully at home on 9th April 2023.

RESULTS

In CCHD, chronic hypoxia causes vascular and nonvascular glomerular changes. Polycythemia with high viscosity state increases glomerular endothelial shear stress and vascular resistance, stimulating nitric oxide release leading to afferent arteriole vasodilatation and glomerular hyperfiltration. Cyanosis and angiogenesis lead to

podocyte hypertrophy and segmental glomerulosclerosis. Nonvascular mechanism occurs via pulmonary circulation shunt through which megakaryocytes pass intact to systemic circulation and to glomerulus. These would release transforming growth factor- β (TGF- β) and platelet-derived growth factor (PDGF) which increase mesangial matrix and proliferation. All these contribute to albuminuria/proteinuria and chronic kidney disease (CKD). This patient developed acute kidney injury on 3rd April 2023 with creatinine increment to 86umol/L (KDIGO stage 1) and noted thrombocytopenia (274 to 146 and latest 83 [109/L]). No arterial blood gas was drawn.

CONCLUSION

Cyanotic nephropathy may be an end-of-life presentation of CCHD. ACP may be considered to be incorporated into clinical management.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 188

Abstract ID: MSN2023-PD03

AMYLOIDOSIS MIMICKING SYSTEMIC LUPUS ERYTHEMATOSUS: A CASE OF COINCIDENCES

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INTRODUCTION

Systemic lupus erythematosus (SLE) is a common multi-system connective tissue disease encountered among Malaysian population. On the other hand, systemic amyloidosis is a rare protein misfolding and deposition disease which also can present with various symptoms and organ dysfunctions.

CASE PRESENTATION

We report a case of a 61 year old lady, referred for management of lupus nephritis. She initially presented with a 6 months history of constitutional symptoms with recurrent exudative bilateral pleural effusion associated with pedal oedema, alopecia, vasculitic skin rash and delirium. Blood investigations showed positive anti-nuclear antibody (ANA) 1:100, normal C3 and C4, creatinine 238 $\mu\text{mol/L}$, Albumin 24 g/L, urine protein creatinine index (UPCI) 0.22 g/mmol and UFEME of Protein 2+, RBC 1+. Ultrasound showed echogenic kidneys with reduced parenchymal thickness hence was not biopsied. Skin biopsy was done to rule out lupus vasculitis, while pleural biopsies were done earlier to rule out tuberculosis. As she fulfilled the ACR/EULAR classification criteria for SLE, she was empirically treated as acute flare of lupus nephritis, serositis, cerebral lupus and vasculitis.

RESULTS

The report of all the biopsies taken surprisingly turned out to be consistent with amyloidosis.

Subsequent echocardiogram showed severe ventricular hypertrophy with restrictive pattern suggestive of cardiac amyloidosis. Serum and urine electrophoresis showed IgG lambda paraprotein band with background immunoparesis. Diagnosis was revised to light chain amyloidosis (AL Amyloidosis) and she was started on bortezomib based chemotherapy. Unfortunately, the treatment was complicated with sepsis and she passed away 2 weeks post chemotherapy.

CONCLUSION

This case highlights the similarities in clinical presentation of SLE and systemic amyloidosis. High index of suspicion of amyloidosis is required to prompt further investigation, especially when the diagnosis of lupus is made beyond childbearing age as there is high incidence of positive ANA in the normal population.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 185

Abstract ID: MSN2023-PD04



ANCA ASSOCIATED VASCULITIS (AAV) WITH EXTRA RENAL MANIFESTATION

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INTRODUCTION

ANCA associated vasculitis is a spectrum of autoimmune disease causing inflammation of small and medium-sized blood vessels. With understanding of pathogenesis, patient survival has improved with timely diagnosis and treatment. We reported two cases of AAV with different extrarenal features and outcomes.

CASE PRESENTATION

Cases were studied using clinical information derived from medical notes.

RESULTS

Patient 1

A 62-year-old gentleman with underlying chronic-obstructive-pulmonary-disease, presented with left eye blurry vision, bilateral upper and lower limb numbness and weakness.

His blood investigation showed hypereosinophilia, creatinine of 434mcmol/L. Urine analysis showed protein 1+ and blood trace. P-ANCA was positive with anti-MPO titre 16 IU/ml, anti-GBM was negative. Ultrasonography showed renal parenchymal disease. Eye assessment showed central retinal artery occlusion. Nerve conduction study showed bilateral median, ulnar and right sciatic neuropathy. Renal biopsy showed minimal glomerular change, increased eosinophils and interstitial nephritis without vasculitis. The diagnosis eosinophilic granulomatosis with polyangiitis was made.

Patient was started on methylprednisolone and given 6 cycles of cyclophosphamide. His

neurological function improved and renal profile recovered to baseline during subsequent follow up.

Patient 2

A 59-year-old gentleman presented with cough, difficulty breathing and hematuria. He had acute kidney injury with creatinine of 1487mcmol/L. His urine analysis showed protein 3+ and blood 3+. P-ANCA was positive with raised anti-MPO titre of 161 IU/ml, anti-GBM was negative. Ultrasonography showed no obstruction. Renal biopsy showed cellular crescent and interstitial nephritis with no other changes. He was diagnosed with microscopic polyangiitis.

Patient had upper gastrointestinal bleeding and endoscope found Forrest Ib ulcer at posterior wall of duodenum which was injected adrenaline and heater probe coagulation done. He subsequently developed hemoptysis and respiratory distress required ventilation. He was started on methylprednisolone and commenced on 6 sessions of plasma exchange but eventually succumb to nosocomial sepsis with Klebsiella pneumoniae ESBL bacteraemia.

CONCLUSION

AAV remains a challenging disease with varying extrarenal manifestation.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 84

Abstract ID: MSN2023-PD05

ANTI-GLOMERULAR BASEMENT MEMBRANE (ANTI-GBM) DISEASE: THE CHALLENGES IN DIAGNOSIS AND THE CHOICE OF TREATMENT

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INTRODUCTION

Anti-glomerular basement membrane (anti-GBM) disease is an autoimmune disorder. Most patients develop widespread glomerular crescent formation and rapidly progressive glomerulonephritis (RPGN) features. Investigations included serological assay of serum anti-GBM antibodies and renal biopsy required for diagnosis. The treatment depends on the creatinine level at presentation, dialysis dependency, and pulmonary involvement to decide on plasmapheresis plus glucocorticoid, and immunosuppressive therapy.

CASE PRESENTATION

17-year-old lady, who was presented with features of nephrotic-nephritic syndrome and RPGN, required intermittent dialysis during hospitalization, serology and renal biopsy showing features of anti-GBM glomerulonephritis. Oral corticosteroids and cyclophosphamide were commenced. However, there is no renal recovery, and the patient is dialysis-dependent and considering long-term renal replacement therapy, including renal transplant.

RESULTS

Discussion: Anti-GBM disease is a small vessel vasculitis. Early diagnosis and intervention determine the response to therapy and long-term prognosis. Some experts do not treat

dialysis-dependent patients without pulmonary haemorrhage since there is a very low likelihood of kidney response. Some of them consider short trials of plasmapheresis and immunosuppressive therapy, particularly among those patients with very acute disease, younger patients who are better able to tolerate aggressive immunosuppression, and patients whose renal biopsy shows focal crescentic glomerular damage associated with acute tubular injury. Recurrence of anti-GBM disease may be as high as 50% after transplantation in patients with detectable anti-GBM antibodies at the time of transplantation.

CONCLUSION

Conclusion: Anti-GBM disease has poor prognostic value in untreated patients. Early diagnosis and intervention are crucial for achieving a good response to treatment. A trial of plasmapheresis plus immunosuppressive therapy can be considered for patients with anti-GBM disease who require immediate dialysis at presentation but do not have pulmonary hemorrhage. This is particularly important for patients with very acute disease, renal biopsy showing focal crescents and tubular damage, or those with anti-neutrophilic cytoplasmic antibody (ANCA) and systemic vasculitis.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 66

Abstract ID: MSN2023-PD06



CLINICAL CHARACTERISTICS OF PATIENTS WITH MINIMAL CHANGE DISEASE (MCD) THAT EVOLVED TO FOCAL SCLEROSING GLOMERULOSCLEROSIS (FSGS)

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INTRODUCTION

Minimal change disease (MCD) and focal sclerosing glomerulosclerosis (FSGS) are both podocytopathies and are possibly diseases that lie on a similar spectrum with FSGS being the severe form.

CASE PRESENTATION

All patients who had undergone renal biopsy in Hospital Serdang and had documented diagnosis of FSGS from January 2007 until December 2022 were identified. Data was collected and analysed using SPSS version 17.

RESULTS

A total of 10 patients were identified as minimal change disease prior to FSGS diagnosis. 8 were biopsy proven minimal change disease (MCD) while other two were treated as presumed MCD. At time of biopsy, all patients presented as relapse in nephrotic syndrome. Mean age of diagnosis was 18 years for MCD while mean age of FSGS diagnosis was 25 years. 8 were males and one patient had positive family history while 7 had some form of haematuria. All patients were on steroids with 9 of them were given second line immunosuppressant. Majority of patients were on azathioprine followed by cyclosporine and mycophenolate mofetil. Mean follow up was 5.7 years. 5 were obese on presentation, while 9 were primary FSGS. Those with MCD had higher platelet (mean 462) and total cholesterol (mean 14.2) values at diagnosis of FSGS. Mean relapse after diagnosis of FSGS was 2.2 episodes. As of

December 2022, 7 patients had normal kidney function, 2 patients were CKD V and 1 patient had passed away due to acute coronary syndrome.

CONCLUSION

Minimal change disease is part of a spectrum podocytopathies which will lead to FSGS if the initial insults are not reversed. Those with frequent relapses in MCD, older children with nephrotic syndrome and those with presence of haematuria may be warranted for a repeated biopsy to rule out evolution to FSGS.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 146

Abstract ID: MSN2023-PD07

COLLAPSING VARIANT FSGS IN A SINGLE CENTRE: CLINICAL CHARACTERISTICS AND OUTCOMES.

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INTRODUCTION

Collapsing variant of FSGS is an uncommon form that is associated with poorer prognosis. In this study we attempt to elucidate the clinical and laboratory features of this variant.

CASE PRESENTATION

All patients who had undergone renal biopsy in Hospital Serdang and had documented diagnosis of FSGS from January 2007 until December 2022 were identified. Total of 60 primary FSGS were identified with 8 of them being collapsing variant. Data was collected analysed using SPSS version 17.

RESULTS

In this cohort, 13% of primary FSGS were of the collapsing variant. Male to female ratio was 1:1 with mean age of diagnosis was 30 years. Four patients had hypertension while two patients had diabetes mellitus. 3 patients had positive family history of end stage renal disease. 7 patients had some form of haematuria. 6 patients were on steroids while 6 had AKI at diagnosis. Nephrotic syndrome was seen in 6 patients. 6 patients were obese. None of the patients have retroviral disease. Mean follow up was 6.3 years. All patients with nephrotic syndrome were treated with steroids however 2 patients developed steroid related complications. 4 patients were started on second line treatment, namely azathioprine or cyclosporine. 4 patients developed end stage renal disease requiring renal replacement therapy within 6 years from diagnosis and one patient passed away due to acute coronary syndrome. One patient developed chronic kidney disease while two more have

preserved normal renal function. Histopathological examination showed 5 patients had IgM deposits positivity and 3 patients had C3 positivity. However, all patients had normal serum C3 levels.

CONCLUSION

Collapsing variant had a higher prevalence in our cohort. In addition, these cases were not associated with retroviral disease. However, the renal outcome is similar to literature as 50% have developed end stage renal disease.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 148

Abstract ID: MSN2023-PD08



MANAGING RAPIDLY PROGRESSIVE GLOMERULONEPHRITIS: A CASE REPORT ON MICROSCOPIC POLYANGIITIS.

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INTRODUCTION

Antineutrophil cytoplasmic antibody (ANCA)-associated vasculitis (AAV) is classified into granulomatosis with polyangiitis (GPA), microscopic polyangiitis (MPA), and eosinophilic granulomatosis with polyangiitis (EGPA). Clinical features include haematuria, proteinuria and rapidly declining glomerular filtration rate (GFR).

CASE PRESENTATION

We present a case of MPA in a woman with rapid progressive glomerulonephritis (RPGN) and raise awareness on the approach to managing her disease.

RESULTS

A 56-year-old female with well-controlled hypertension and type II diabetes mellitus, was treated for hypoglycaemia due to gliclazide and pre-renal acute kidney injury. Her urea on presentation was 8.4 mmol/l and serum creatinine 225 umol/l (eGFR 22 ml/min/1.73 m²); baseline was normal a year ago. Urinalysis showed protein 3+, glucose 2+, erythrocytes 3+, and urine protein 2g / 24 hours. One month later, her creatinine doubled to 419 umol/l (eGFR 10 ml/min/1.73 m²). Kidney ultrasound was normal. Her renal biopsy showed diffuse proliferative (20% cellular crescent) and sclerosing pattern (36% global and segmental sclerosis) with weak C3 positivity and moderate chronic tubulointerstitial damage. Anti-MPO antibody and p-ANCA were positive. Diagnosis of RPGN due to MPA AAV was made. Intravenous methylprednisolone was administered 500mg daily for 3 days, followed by

tapering dose oral prednisolone. Concurrently, she was induced with oral cyclophosphamide 100 mg daily for four months. After achieving remission with stable serum creatinine of 107-119 umol/l, she is given tapering prednisolone and azathioprine 100 mg daily as maintenance therapy. She has persistent haematuria and proteinuria, which do not indicate treatment failure. Although MPO-ANCA AAV is associated with lower risk of relapse, it has poorer renal outcome compared to PR3-ANCA AAV. Rituximab can be used as an alternative treatment in case of relapse.

CONCLUSION

MPA, a subtype of AAV, is a potentially treatable cause of RPGN. A high index of suspicion is required to diagnose this disease. Early administration of immunosuppressants leads to lower morbidity and mortality associated with end stage kidney disease.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 22

Abstract ID: MSN2023-PD09



MAPPING THE NATURAL COURSE OF SECONDARY FOCAL SCLEROSING GLOMERULOSCLEROSIS DUE TO OBESITY

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INTRODUCTION

Glomerular disease in obese patient is usually associated with FSGS. In this study, we attempt to look at clinical features of obese patients with FSGS and significant factors that affect outcomes and management in comparison with non – obese FSGS cohort.

CASE PRESENTATION

A retrospective single centre study of all patients who had undergone renal biopsy in Hospital Serdang and had documented diagnosis of FSGS from January 2007 until December 2022. Obesity was defined as BMI $\geq 25\text{kg/m}^2$. Data was collected and analysed using SPSS version 17.

RESULTS

From 102 FSGS patients, obesity was seen in 65 patients. In these patients, 51% were female and 51% were primary FSGS. 46% had hypertension, 15% had diabetes and 45% were being treated for hypertension. 6 patients had family history of renal disease. 43% had microscopic haematuria, 48% had acute kidney injury at diagnosis and 29% had doubling of serum creatinine at end of follow up. 18.5% developed end stage kidney disease while 46% maintained normal kidney function. 72% were on steroids with 47% developing steroid related complications. The most common steroid complication being Cushingoid appearance. 41% were on second line immunosuppressant with cyclosporine and azathioprine being the most frequently used. 48% of females were detected during pregnancy with 95% detection of proteinuria in antenatal period.

Conversely, presence of obesity did not significantly change usage of steroids in the management of patients, nor did it increase the incidence of steroid related complications compared to the non-obese cohort. There was no difference between eGFR at end of follow up, doubling of serum creatinine at end of follow up or development of CKD between obese and non – obese groups of FSGS patients.

CONCLUSION

This study illuminates the clinical features of FSGS in obesity. In comparison with non – obese FSGS, there were no differences in renal outcomes.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 138

Abstract ID: MSN2023-PD10

PERITONEAL DIALYSIS FOCUS COUNSELLING AND ASSESSMENT PROGRAM IN KELANTAN: DESCRIPTIVE ANALYSIS AND ASSESSMENT OUTCOME

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INTRODUCTION

There are expected variations in the way the Peritoneal Dialysis (PD) program is executed among the states in Malaysia due to the influence of the economy of the region, the level of education, and the ethnic background of the community involved. We aim to determine the patient's demographic and the outcome of the PD focus counselling and assessment program in Kelantan.

CASE PRESENTATION

This is a retrospective study conducted in HRPZ II and Hospital Pasir Mas between 1st January and 31st August 2022 involving patients aged above 12 years referred for PD focus counselling and assessment. The data such as age, gender, educational and financial background, aetiology of chronic kidney disease (CKD), CKD staging, and the outcome of the counselling were extracted and analyzed.

RESULTS

A total of 136 patients received PD focus counselling and assessment from 1 January until 31 August 2022. The median age was 54.01 (SD±14.07) years, 46% (n=63) were male, 78% (n=55) had at least secondary education level but only 30% (n=40) had a fixed occupation at the time of review. The mean GFR at the time of counselling was 8.86mL/min/1.73m² (SD±5.02) with mean creatinine of 694.05umol/L (SD±460.94). The primary aetiology for CKD is diabetic kidney disease (58%), hypertensive nephropathy (12%) and lupus nephritis (2.9%).

While 91 (66.9%) patients passed the PD assessment, only 38 (41.8%) patients went into the PD program. "Undecided for long-term RRT" (n=29, 54%) was the main reason for not proceeding into the CAPD program despite passing the assessment. Among whom failed the assessment, "no interest in CAPD" (n=16, 11.8%) followed by "no assistance for CAPD" (n=14, 10.3%) were the main reason for failing the assessment.

CONCLUSION

The average patient received PD counselling and assessment at the advanced stage of CKD, reflecting the delay in decision-making for renal replacement therapy. Furthermore, "undecided or not interested" in PD are the main reasons for not proceeding toward the PD modality. Further analysis is needed to implement an effective approach to encourage further PD uptake in Kelantan.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 116

Abstract ID: MSN2023-PD100

PERITONEAL DIALYSIS RELATED PERITONITIS RATES AND OUTCOME- A SINGLE CENTER EXPERIENCE IN LOW MIDDLE-INCOME COUNTRY

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INTRODUCTION

Peritonitis remains the greatest obstacle to long term success of Peritoneal Dialysis. It is associated with hospitalization, mortality, increased treatment costs, and peritoneal membrane dysfunction. The purpose of the study is to investigate the Peritonitis rate per patient year and outcomes of peritonitis in our institute.

CASE PRESENTATION

Data was collected retrospectively from the Health Management Information System record of the Indus Hospital and Health Networks Karachi Korangi campus, after taking Institutional and ethical review board permission. All ESRD patients enrolled in CAPD program from March 2021 to Dec 2022 were included.

RESULTS

During the study period, We had 30 active CAPD patients, out of which 26 adults (86.7%) and 4 children (13.3%). A total of 8 patients (26.7%) experienced peritonitis and 22 (73.3%) remained peritonitis-free. However, there were 11 episodes (36.7%) of peritonitis observed among these 8 patients. The number of episodes of peritonitis per patient year were found to be 1.5 and 0.69 for the years 2021 and 2022 respectively. 8 (72.7%) were culture negative, the rest of 3 had Enterobacter, pseudomonas, and mycobacterium tuberculosis growth respectively (9.1% each). The associated causes identified are noncompliance to sterilization steps in 5 cases (45.5%), 02 after gastroenteritis (18.2%), 01 disseminated tuberculosis (9.1%), 01 associated with urosepsis (9.1%), 01 child started PD exchange without supervision of the trained caretaker (9.1%), and

01 patient received assistance from an untrained person at home (9.1%). In one patient (9.1%), Refractory peritonitis necessitated catheter removal and no mortality was observed because of peritonitis complication.

CONCLUSION

We observed that the number of patients increased, however the rate of peritonitis improved to 0.69 from 1.5 episode per patient year, which is getting closer to ISPD standard recommendation (0.4 episode per patient year)

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 150

Abstract ID: MSN2023-PD101

POTENTIAL PRESERVATION OF RESIDUAL RENAL FUNCTION WITH INCREMENTAL DIALYSIS AT THE INITIATION OF PERITONEAL DIALYSIS

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INTRODUCTION

Incremental PD (IncrPD) is the practice of initiating PD exchanges less than the “standard dose” in consideration of residual renal function (RRF), with the intention to increase dialysis dose in a step-wise manner when RRF decreases. The concept of IncrPD is practiced in many countries although some nephrologists are still hesitant due to lack of data on benefit. The objective of the study is to analyze our center's clinical experience using IncrPD to initiate dialysis in a selected individual.

CASE PRESENTATION

This was a single-center, observational study of patients undergoing Teckoff-catheter insertion and started on PD between Jan 2020 and Dec 2021 in Hospital Kuala Lumpur. Patients with good initial renal residual function (RRF) (>500 ml/day) were enrolled into the IncrPD group (<4 exchanges/day) and standard PD (StdPD) group (≥4 exchanges/day). Clinical data including demographic, RRF, and creatinine were collected. Inverse probability weighting (IPW) was used to adjust the propensity scores to balance the covariates between IncrPD and StdPD to reduce selective bias.

RESULTS

A total of 151 patients was recruited with a mean age of 49.85 (±15.17) and males constituted 57.6% (87) of the study population. Among them, 74 patients underwent IncrPD and 77 patients underwent StdPD. Age, sex, BMI, and baseline creatinine did not differ between group, however, IncrPD group had higher RRF (1052.70 ± 390.98). Upon 24 months of observation, the mean IncrPD

duration was 19 months (± 9.795), where 5 patients were still undergoing IncrPD for more than 3 years. At 12 months, IncrPD had 3.031 higher odds of having an RRF of more than 500 compared to StdPD (OR = 3.031, p-value <0.001).

CONCLUSION

IcrPD showed better preservation of RRF and can be a choice of initial PD prescription. Further study can be initiated to explore further benefits of IcrPD.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 151

Abstract ID: MSN2023-PD102

PREDICTORS OF PD CATHETER REMOVAL IN ACUTE PD PERITONITIS: A SINGLE CENTER EXPERIENCE

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INTRODUCTION

Peritoneal dialysis (PD)-associated peritonitis is a serious complication. Peritonitis outcome varies from resolved, requiring catheter removal, developing complications or mortality. This study aims to identify factors associated with PD catheter removal in acute PD peritonitis.

CASE PRESENTATION

A total of 410 consecutive PD patients were recruited into the study and followed up from 1st Jan to 31st December 2022. Patients who had episodes of peritonitis were identified and analysed. Culture-positive PD-related peritonitis should fulfill two of the following criteria: (1) clinical features consistent with peritonitis, (2) dialysis effluent white cell count >100/ μ L with >50% polymorphonuclear leukocytes, (3) positive dialysis effluent culture. Culture-negative PD-related peritonitis is defined as no microbiological growth at 72 hours. Demographic data, laboratory parameters, and peritonitis details were documented.

RESULTS

A total of 112 patients (27.3%) were identified to have 152 episodes of PD peritonitis. Mean age of PD peritonitis cohort were 58.34 years (SD:12.69), with a median peritoneal dialysis vintage of 3.00 years (IQR:2) and 46% were diabetics.

There were 30.9% culture negative peritonitis, 27.6% gram positive organism with majority Staphylococcus Aureus (6.6%), 32.2% gram negative organism with majority Pseudomonas Aeruginosa (12.5%), 2% fungal and 7.2% polymicrobial.

Sixty patients (39.5%) had catheter removal. There was no significant difference in terms of gender ($p=0.575$), dialysis vintage ($p=0.862$), diabetes ($p=0.846$), self-care/assisted peritoneal dialysis ($p=0.575$), and KT/V ($p=0.349$) in the PD catheter removal group.

However, culture-negative peritonitis significantly contributed to PD catheter removal outcome ($p=0.001$, OR:4.46).

CONCLUSION

Our study showed PD culture-negative peritonitis were significantly has higher catheter removal rate.

Understanding predictors for PD catheter removal in peritonitis is crucial for optimal management and improving outcomes in PD patients.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 177

Abstract ID: MSN2023-PD103



RARE CASE OF CANDIDA CIFERRI PD PERITONITIS: A CASE REPORT

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INTRODUCTION

Fungal PD peritonitis is perilous due to high treatment failure rate. *Candida ciferri* causing infections in humans are rare.

CASE PRESENTATION

We report a case of *Candida ciferri* causing PD peritonitis.

RESULTS

Mr. H who works for a postal service, was on CAPD treatment for 10 years before he presented with abdominal pain and cloudy PD fluid. He experienced multiple exit site infections but this is his 1st PD peritonitis. His risk factor was doing PD exchanges in an ungazetted area at work. On admission, his blood investigations revealed Hb 7.8g/L, WBC 9.6 x 10⁹/L, C-reactive protein 281.6 mg/L, potassium 3.7mmol/L. Peritoneal effluent white cell count of 553 which increased to 8000 the next day. He was given intraperitoneal antibiotics as per ISPD guidelines with anti-fungal prophylaxis. His PD cultures grew yeast at day 5 of admission which prompted us to change his treatment to intravenous Fluconazole. Although his clinical symptoms improved, his PD fluid was still cloudy. *Candida Ciferri* was identified as the causative agent which was sensitive to Voriconazole and resistant to all others including Fluconazole, Caspofungin, Micafungin, Amphotericin B. His antifungal treatment was changed to Voriconazole. Tenckhoff catheter removal was complicated with inferior epigastric artery injury and patient needed a second surgery for artery ligation, evacuation of clots and peritoneal wash-out. Post-operation period was complicated with intestinal failure and surgical site infection with Multidrug resistant *Pseudomonas aeruginosa*. He succumbed at day 22 despite being treated with intravenous Voriconazole, Colistin E and Meropenem.

CONCLUSION

Candida ciferri is an emerging concern as a new fluconazole-resistant yeast infection in CAPD patients.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 45

Abstract ID: MSN2023-PD104

SINGLE CENTRE EXPERIENCE WITH ACINETOBACTER PD PERITONITIS INCLUDING MULTI-DRUG RESISTANT(MDR) STRAINS: A CASE SERIES.

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INTRODUCTION

Acinetobacter is a rare but important cause of peritonitis among peritoneal dialysis (PD) patients. Increasing presence of multi drug resistant (MDR) strain of Acinetobacter is a concern. We report the outcome of Acinetobacter PD peritonitis in our centre.

CASE PRESENTATION

We retrospectively report case series of 6 Acinetobacter PD peritonitis in a single centre from April 2021 to April 2023.

RESULTS

Acinetobacter was responsible for 11.5% of all 52 peritonitis episodes over the last 2 years affecting 42 patients. Of the 6 subjects, 3 were assisted PD program and 3 were self performed PD. 3 subjects had hospitalisation within 1 month prior to onset of Acinetobacter peritonitis. All subjects had poor compliance to PD procedure prior to peritonitis episode. One subject had wet contamination prior to PD peritonitis episode. Hypokalaemia was common at onset of peritonitis (5 out of 6 subjects). Acinetobacter baumannii was responsible for 5/6 cases while Acinetobacter junii was the causative agent for the remaining case. Of the 5 Acinetobacter baumannii peritonitis cases, 4/5 were sensitive to ampicillin/ sulbactam, ceftazidime and gentamicin. One case of Acinetobacter baumannii peritonitis and Acinetobacter junii were MDR strains, resistant to carbapenem and other beta lactam antibiotics. All 6 cases received intraperitoneal antibiotics. Of the 4 cases sensitive strains, 2 cases received combination of ceftazidime and gentamicin, while the other 2 cases received combination of ceftazidime and ampicillin/ sulbactam. The case of MDR Acinetobacter junii peritonitis received

intraperitoneal polymyxin B monotherapy, while the remaining case with MDR strain was given intraperitoneal polymyxin B and ampicillin/sulbactam combination. Total antibiotics duration was 21 days for all 6 cases. All cases were cured of Acinetobacter peritonitis and resumed PD.

CONCLUSION

Acinetobacter peritonitis are increasingly common. Treatment outcome with combination antibiotics are often successful. Successful treatment of MDR Acinetobacter peritonitis is possible.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 42

Abstract ID: MSN2023-PD105



STATE OF SABAH: PERSPECTIVE ON PD PREFERRED POLICY

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INTRODUCTION

The prevalence of chronic kidney disease (CKD) throughout Malaysia is 15.5% but the state of Sabah has the lowest dialysis prevalence in Malaysia. The dialysis treatment per million population was 140 for Sabah and 327 for Johor both with similar population rates for the year 2021. Factors contributing to this result are social economic status, limited haemodialysis (HD) slot availability in government sectors, and the low number of nephrologists per population. To improve the dialysis service, we started PD preferred policy in early 2020.

CASE PRESENTATION

Retrospective observational cohort of peritoneal dialysis (PD) population incremental rate over 3 years pre- and post-implementation of policy.

RESULTS

Data were collected from 3 PD units in Sabah on the difference in PD patients at the end of each year (31 December) from 2016 to 2022. The average increment of patients over the 3 years pre- and post-policy was 13, 122 at QEH, -3.6, 0.6 at Hospital Duchess of Kent (HDOK) and -0.7, 13 at Hospital Tawau respectively. A significant increase in the number of PD patients was at Queen Elizabeth Hospital (QEH). Despite having the same policy, units (Hospital Tawau, and HDOK) at the East coast did not show dramatic changes. This is mainly due to better enforcement of policy and timely Tenckhoff catheter insertion at QEH with the presence of resident nephrologists.

CONCLUSION

PD preferred policy has enabled the state to provide optimum dialysis for new ESKD on the

West coast of Sabah. The policy change has to go hand in hand with on-the-ground enforcement to make it successful.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 20

Abstract ID: MSN2023-PD106

SURGICAL V/S PERCUTANEOUS PERITONEAL DIALYSIS CATHETER INSERTION - A SINGLE CENTER EXPERIENCE

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INTRODUCTION

Among different techniques of Peritoneal Dialysis (PD) catheter insertion, open surgical and percutaneous are more common worldwide. The purpose of the study was to compare the outcome of surgical and percutaneous techniques of PD catheter insertion at our institute.

CASE PRESENTATION

Patient data was collected retrospectively from the Health Management Information System record of the Indus Hospital and Health Networks Karachi, after taking Institutional and ethical review board permission. All patients enrolled in peritoneal program at Indus Hospital Karachi from March 2021 to Dec 2022 were included.

RESULTS

During the last two years, our institute has enrolled a total of 40 patients in the PD program. Patients were divided into two groups based on PD catheter insertion technique. The first group Open surgical technique included 8 (20%) patients; second group modified Seldinger Technique(mST) included 32 (80%) patients. In the first group 2 (25%) patients experienced catheter migration and 1 (12.5%) patient had outflow obstruction. 1 (12.5%) required catheter removal while the rest 2 (25%) were successfully readjusted by Surgeon. In the second group 4 (12.5%) patients experienced outflow obstruction soon after catheter insertion. Alteplase trial was given to 2 out of 4, which remained unsuccessful. All these catheters were removed and successfully reinserted by the same technique. 1 patient who failed fluoroscopic guided PD catheter insertion, had successful reinsertion

under CT guidance. In the second group 2 (6.2%) patients experienced PD catheter insertion related peritonitis as compared to none in first group. No other procedure related complications like trauma, bleed, leakage was noted in either group.

CONCLUSION

The study concluded that modified Seldinger technique is noninferior to surgical technique in terms of mechanical complications. Infection rate was found higher in Modified Seldinger Group at our institute, though overall PD catheter insertion related infection rate (5%) is comparable to ISPD recommendations.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 153

Abstract ID: MSN2023-PD107



THE CARDIOTHORACIC RATIO IN PATIENTS NEWLY INITIATED ON PERITONEAL DIALYSIS AND ITS ASSOCIATION WITH HOSPITAL ADMISSIONS, MORTALITY AND CARDIAC EVENTS

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INTRODUCTION

The Cardiothoracic Ratio has traditionally been used as one of the many guidelines for fluid status estimation in Peritoneal Dialysis (PD) patients. We hypothesize that it may be further used to predict the risk of hospital admissions in patients initiated on Peritoneal Dialysis.

CASE PRESENTATION

In this single center retrospective study, patients initiated on PD were recruited over 2 years (January 2019 - December 2020). These patients clinical notes from the date of initiation of PD until 1 year after PD was initiated was reviewed. Definitions of normal CTR - less than the mean CTR value, mild cardiomegaly - CTR between the mean and mean+1 SD, and moderate-to-severe cardiomegaly - more than mean CTR+1 SD. Primary outcome was the number of hospital admissions, secondary outcomes were recorded new cardiac events and death occurrences. We also measured the correlation between CTR and anemia (Hb<10) and Malnutrition (Alb<36).

RESULTS

Among the total of 93 patients, classification of CTR size as follows - 48 (51%) of patients had normal CTR, 32 patients classified as mild cardiomegaly (34%) and 14 patients classified as severe cardiomegaly (14.9%). Mean albumin levels was 29.8 and mean hemoglobin levels was 8.7, numbers were far below the accepted targets, likely due to patients just being newly started on PD. Chi-Squared analysis / Fishers Exact Tests showed no significant differences between CTR and the incidences of anemia, malnutrition, hospital admissions, cardiac events and death.

CONCLUSION

The preliminary results of this study indicates that CTR may not be correlated with the outcomes of the study as indicated above in this population of patients newly initiated on PD. However, the number of study subjects and length of follow up should be taken into account. An increased number of study subjects and follow up over a longer study period may show a change in outcome of the study.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 131

Abstract ID: MSN2023-PD108

THE MISPLACED DANGLERS

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INTRODUCTION

Mechanical obstruction of Tenckhoff Catheter (TC) is one of the main challenges in patient undergoing continuous ambulatory peritoneal dialysis (CAPD). Intra-abdominal cause of blocked catheter flow after years of CAPD should be considered.

CASE PRESENTATION

Case report

RESULTS

We describe two cases of blocked TC in our centre. The first patient is a 59-year-old lady who was initiated on CAPD since May 2019. Due to subcutaneous leak, she was converted from CAPD to automated peritoneal dialysis (APD) in November 2020. There was no history of CAPD peritonitis. However, in November 2022, she presented with sudden blocked of TC. A laparoscopic examination was performed, and it was found that the TC was trapped inside the broad ligament of uterus. A new TC was inserted while the old TC was removed in the same setting as the exit site was retracted with extruded external cuff. Consequently, she is able to continue with APD without further issues.

The second patient is a 67-year-old gentleman who was commenced on CAPD since November 2020. His CAPD was rather uneventful albeit there was a history of exit site infection but no peritonitis. He initially presented to us in March 2023 with symptoms of intestinal obstruction. Contrast-enhanced computed tomography (CECT) scan of the abdomen done showed dilated small bowel with clumped loop of bowel near the tip of TC. A diagnostic laparoscopy was performed, and it showed severe adhesion of bowel loops with distal end of TC deeply buried under the adhered bowel. TC was removed and

patient recovered well. As he has both good residual renal function and solute clearance, he remains CKD grade 5 without dialysis dependant.

CONCLUSION

In conclusion, timely referral for diagnostic laparoscopy and interventions can prevent conversion to haemodialysis and maintain on technique survival.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 107

Abstract ID: MSN2023-PD109



MEMBRANOPROLIFERATIVE GLOMERULONEPHRITIS (MPGN) IN HEPATITIS B: SHOULD RESOLUTION OF PROTEINURIA USE AS AN IDEAL MARKER FOR RESPONSE?

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INTRODUCTION

Glomerulonephritis is a recognised complication of chronic hepatitis B with multiple pathological presentations and variable response to treatment with antiviral agent. We report a case of membranoproliferative glomerulonephritis (MPGN) presented with severe nephrotic syndrome that responds poorly to antiviral and immunosuppression

CASE PRESENTATION

A 63-year-old woman with underlying chronic hepatitis B presented with nephrotic syndrome for two-month duration. Clinical examination revealed bilateral pedal oedema with absence of stigmata for chronic liver disease. Laboratory investigations showed serum albumin 13 g/L, ALT 87 U/L, Urine PCI of 2.20 g/mmol and Creatinine of 143 µmol/L. Her HBV DNA viral load was 3.24 million IU/ml.

Renal biopsy performed showed mesangial hypercellularity, and duplication of glomerular basement membrane with subendothelial and subepithelial immune complex deposits which is consistent with immune complex related MPGN. She was treated conservatively with RAAS blocked and started on entecavir to reduce her viral load.

She had improvement of symptoms with significant viral suppression within 6 months,

however, had persistent nephrotic range proteinuria despite more than 50% UPCI reduction. Decision was made to start the patient on prednisolone (0.5mg/kg/day), targeting lower UPCI and to induce complete remission while continuing the antiviral treatment.

RESULTS

The patient had initial improvement of kidney function with reducing proteinuria, 0.26g/mmol, and increasing albumin, 31g/dL. However, there was an increment of viral load, transaminitis 221 U/L, and complication of gallbladder empyema. While tapering down steroids, the patient had recurrent nephrotic syndrome due to MPGN relapse with subsequent acute kidney injury.

CONCLUSION

The case highlights the difficulty in managing MPGN-related hepatitis B. Combination of immunosuppressant and antiviral has shown to be effective in inducing remission in many studies but with concerns of flare of hepatitis B. In refractory cases like we reported, second-line immunosuppression is indicated, but with paucity of evidence and guideline, it warrants further studies to evaluate the effectiveness of such treatment.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 120

Abstract ID: MSN2023-PD11

THE PERCEPTION OF END STAGE RENAL DISEASE PATIENTS REGARDING PERITONEAL DIALYSIS: THE INITIAL PHASE FOR AN INFORMATION PACKAGE DEVELOPMENT

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INTRODUCTION

In Zamboanga City Medical Center (ZCMC), the population of end stage renal disease (ESRD) patients have exponentially increased which caused the 20 bed capacity dialysis unit to be full. To augment the services, peritoneal dialysis (PD) is now made available in the hospital. But it was noted to have poor acceptance rate among patients with only 17 patients enrolled.

Thus, this study formulated the following objectives: To determine the perception of end-stage renal disease patients of ZCMC regarding renal placement therapy, specifically hemodialysis, and peritoneal dialysis. Precisely to determine the cognition and understanding of ESRD patients regarding the process, purpose, importance, safety, and effectiveness of renal replacement therapies and the reasons influencing treatment preference and their ideas regarding how they can be convinced to use PD over hemodialysis.

CASE PRESENTATION

This research will be the initial part of a multiphasic study in developing an information package. It employed a qualitative research design through focus group discussion (FGD).

RESULTS

The study generated five main themes to describe the perception of ESRD patients regarding PD. These include knowledge about the disease and treatment, fears and beliefs about PD, factors affecting treatment choice and possible interventions to address knowledge gaps, fears, and ideas.

CONCLUSION

ESRD patients value experiences, thoughts, and testimonies of other patients. It is essential to take note of this because it will help the health care providers and policymakers in their interventions. The data is proven to be important in patient involvement, decision making, and overall treatment outcome. The findings can be used in developing a treatment package for PD, which will help them in decision making.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 12

Abstract ID: MSN2023-PD110



UTILISATION OF URGENT START PERITONEAL DIALYSIS (USPD) IN HOSPITAL KUALA LUMPUR (HKL) DURING COVID -19 PANDEMIC

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INTRODUCTION

To compare the outcome of USPD (defined as peritoneal dialysis (PD) initiation within 14 days of PD catheter placement) with conventional start PD (CSPD) during COVID 19 pandemic.

CASE PRESENTATION

A prospective cross sectional study was conducted in the PD unit HKL. Demographic data, PD related infection, hospitalisation, catheter survival and mortality outcome were collected from patients who were initiated on peritoneal dialysis from January 2020 till August 2021.

RESULTS

A total of 197 patients were initiated on peritoneal dialysis over a 20-month period. 87 (44.2%) patients were on USPD and 110 (55.8%) on CSPD. The mean break in for USPD was 11 days. The mean age was 54.6 ± 15.8 . Majority of the patients underwent peritoneoscopic technique for tenckhoff insertion while the rest underwent Seldinger technique (n=168 85.3%, n=29 14.7%). PD patients with diabetes mellitus were more in CSPD as compared to USPD albeit it was not significant (p=0.16). Leaking was observed in 8 (9.2%) in the USPD versus 14 (12.7%) in the CSPD (p=0.747). There were no significant differences in terms of exit site infection, tunnel tract infection and peritonitis between both groups (p > 0.05). However, there was a significant number of hospitalisations in CSPD as compared to USPD (n=41 (37.3%) vs n= 28 (32.2%) respectively) (p< 0.01) . Catheter survival was 21.9 month in USPD and 23.9 month in CSPD (p=0.097). Mortality mean survival time was 22.9 months in USPD and 22.6 months in CSPD (p=0.147).

CONCLUSION

Initiating patients on urgent start PD is associated with a reduced number of hospitalisations compared to conventional start PD while PD related infection, catheter survival and mortality were comparable between the two groups.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 190

Abstract ID: MSN2023-PD111



BENIGN TRANSIENT HYPERPHOSPHATEMIA FOLLOWING ADULT RENAL TRANSPLANTATION: A CASE REPORT

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INTRODUCTION

Transient Hyperphosphatemia (TH) is a benign condition characterized by isolated elevation of alkaline phosphatase (ALP) levels multiple fold the upper limits in the absence of liver or bone disease. It is typically seen in children but rarely reported in adults.

CASE PRESENTATION

We report a case of TH following kidney transplantation.

RESULTS

Mr MS, a 26-year-old man was diagnosed with end stage kidney disease due to chronic glomerulonephritis in 2021. He received a living kidney transplant from his sister in July 2022. He was given basiliximab as induction immunosuppression and mycophenolate mofetil, tacrolimus and prednisolone as maintenance. His perioperative period was uncomplicated with immediate graft function.

His ALP level started to raise at week-14 post-transplant , and gradually increased to a peak of 4897 U/L at week-25 post-transplant. He otherwise asymptomatic and showed no signs of infection. Clinical examinations were unremarkable. His serum ALT, AST and GGT were normal, thus excluding liver pathology. iPTH and tumour markers including AFP, CEA, Ca19-9 and PSA were normal. Ultrasound of the hepato-biliary system and parathyroid glands were normal. Subsequent ALP isoenzyme electrophoresis showed equal bone and liver ALP distribution, typical of benign TH. He was managed conservatively . The ALP level gradually returned to normal at week-37 post-transplant.

CONCLUSION

Benign TH, although rare, should be considered in the differential diagnosis of isolated elevation of ALP following kidney transplantation. Nevertheless, liver disease, bone disease, and infection should be excluded first in these susceptible individuals before establishing the diagnosis of TH.

Category: Doctor

Topic: Transplant

Session: E-Poster Display

Submission ID: 129

Abstract ID: MSN2023-PD112

CAN EARLY-ONSET PROTEINURIA PREDICTS SHORT-TERM RENAL OUTCOME POST KIDNEY TRANSPLANT ?

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INTRODUCTION

Proteinuria after kidney transplantation has variable incidence and is associated with cardiovascular risk and graft survival. However, the magnitude of proteinuria related to the patient's outcome is poorly explored. Therefore, the objective of this study is to look for the association between early-onset proteinuria and the graft outcome 1 year after kidney transplantation.

CASE PRESENTATION

This is a retrospective observational cohort study. We recruited 53 patients post-kidney transplant (living-related and cadaveric) from April 2011 to December 2022. Baseline characteristics and clinical data were obtained. Early onset proteinuria is define as proteinuria at 3 months post transplant measured with urine protein creatinine index (UPCI) and graft function was measured using estimated glomerular filtration rate (eGFR) at baseline and a year post transplant.

RESULTS

Among kidney transplants, 34 was from living donor and 19 were from cadaveric donor. The mean age for both groups is 50 and 53-years-old, respectively. Most kidney transplant recipients received hemodialysis before their transplantation. The mean UPCI for the living donor group was 0.09g and 0.14g for the cadaveric donor group. The mean estimated glomerular filtration rate (eGFR) was 72 ml/min/1.73m² for the living donor group and 73 ml/min/1.73m² for the cadaveric group. There is

no significant difference in the UPCI trends and drop in eGFR between the 2 groups. However, early onset proteinuria is inversely related to the reduction of eGFR at 1-year post-transplant (p=0.04). There is also no correlation between recipient age and BMI with early onset proteinuria.

CONCLUSION

Early onset proteinuria after kidney transplantation was associated with poorer graft function. Therefore, early detection and intervention are paramount. Anti-proteinuric agent is the cornerstone of treatment in this group of patients.

Category: Doctor

Topic: Transplant

Session: E-Poster Display

Submission ID: 187

Abstract ID: MSN2023-PD113



CNI INDUCED SEIZURE- A RARE BUT NOT TO BE FORGOTTEN CAUSE

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INTRODUCTION

Seizures in kidney transplantation (KT) recipients can pose diagnostic challenges due to various etiologies, including metabolic abnormalities, infections, and neurotoxic effects of immunosuppressive medications.

CASE PRESENTATION

We report a case of post KT recipient presented with seizures which could be caused by CNI (calcineurin inhibitor).

RESULTS

A 36-year-old female with end-stage kidney disease of unknown origin, who underwent deceased-donor KT six months prior. She has previous acute antibody-mediated rejection episode which responded to treatment and maintained with augmented triple maintenance immunosuppressants (tacrolimus, mycophenolate mofetil and prednisolone). The patient experienced sudden-onset generalized tonic-clonic seizures and confusion, necessitating intubation for airway protection. Extensive diagnostic investigations, including serial CT brain, cerebrospinal fluid analysis, and infectious workup, metabolic and electrolytes studies failed to reveal a definitive cause for the seizures.

MRI brain which was done later showed non-specific changes with punctate white matter hyper density in the right frontal lobe, no leptomeningeal enhancement, normal MRA and MRV. Patient was treated empirically with intravenous antibiotics, anti-epileptic (levetiracetam) and rehabilitation. The patient's allograft biopsy earlier demonstrated features consistent with calcineurin inhibitor (CNI) toxicity, prompting a revision of her immunosuppressive regimen to everolimus and low-dose tacrolimus

regime and prednisolone. Following these modifications, the patient showed improvement in both clinical and graft function parameters. She was subsequently discharged with stable graft function, remained seizure-free, and exhibited mild residual left hemiparesis.

CONCLUSION

This case highlights the diagnostic challenges encountered in identifying the cause of cryptogenic seizures in kidney transplant recipients. It underscores the importance of considering CNI toxicity as a potential etiology, even in the absence of overt biochemical abnormalities. Early diagnosis and appropriate management of these complications are crucial to prevent irreversible consequences.

Category: Doctor

Topic: Transplant

Session: E-Poster Display

Submission ID: 172

Abstract ID: MSN2023-PD114



FERTILITY AMONG MALE KIDNEY TRANSPLANT RECIPIENTS (KTRs) WHO RECEIVED EVEROLIMUS - SINGLE CENTRE EXPERIENCE

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INTRODUCTION

End-stage kidney disease (ESKD) patients commonly experience sexual disturbance and reduced fertility. Successful kidney transplantation restores these functions in both male and female recipients

1. Everolimus is a class of immunosuppressants that inhibit the mammalian target of rapamycin (mTORi). mTORi may alleviate calcineurin inhibitors (CNI) associated injury, suppression of cytomegalovirus infection and antioncogenic action. mTORi reduces spermatogenesis among male recipients.

2 In animal studies, mTORi is associated with premature birth, low fetal weight, and mortality.³ Manufacturers of Everolimus recommends male patients with female partners of reproductive potential to use effective contraception during treatment for 4 weeks after the last dose. The objective of this study is to examine the incidence of pregnancy among KTRs who were on everolimus and the possible congenital anomaly.

CASE PRESENTATION

This is a cross-sectional single centre study Male KTRs who were on everolimus and under the transplant clinic follow up from 1st March 2022 till 28 February 2023 were interviewed via phone call.

RESULTS

Forty-six male KTRs who are under HKL Transplant Clinic follow up were included. Of the 46 patients, 7 patients were trying to conceive but only 3 patients seek fertility treatment. Three (6.5%) patients fathered a total of 7 children

while consuming everolimus. Two patients (53%) had one child, and 1 (6%) had 5 children. There was no reported congenital abnormality among the children. Two (66%) of the 3 patients who manage to conceive were not on fertility treatment. Only 2 (4%) out of the 47 patients had knowledge regarding fertility treatment pre-transplant.

CONCLUSION

In our population, some patients taking everolimus have shown difficulty to conceive. Pretransplant counselling about male fertility and sperm banking could be initiated for future reproductive plans.

Category: Doctor

Topic: Transplant

Session: E-Poster Display

Submission ID: 154

Abstract ID: MSN2023-PD115

SPONTANEOUS KIDNEY ALLOGRAFT RUPTURE

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INTRODUCTION

Kidney allograft rupture is a dangerous complication of kidney transplantation (KT). We described a case of cadaveric KT complicated with spontaneous allograft rupture.

CASE PRESENTATION

A 29 year-old lady with end-stage kidney disease on maintenance haemodialysis was assessed for deceased-donor KT. She underwent successful KT on 1 January 2023 with basiliximab as induction agent and maintained with oral tacrolimus, mycophenolate mofetil and prednisolone. She developed delayed graft function and graft biopsy performed on 10 January 2023 revealed antibody mediated rejection. She was pulsed with intravenous methylprednisolone and underwent urgent daily double filtration plasmapheresis with intravenous immunoglobulin. Four days post biopsy, she complained of severe abdominal pain over graft region. Urgent CT angiography of graft kidney revealed perinephric collection. She underwent emergency exploratory laparotomy, which revealed a long ruptured wound along the convex border of the kidney. Clot evacuation and renorrhaphy were done to salvage the allograft. Unfortunately, in view of persistent drop in haemoglobin despite blood transfusion, she underwent graft nephrectomy on 21 January 2023. Following that, she resumed back on regular maintenance haemodialysis.

RESULTS

Kidney allograft rupture usually occurs along the convex border of the kidney. Time interval between allograft rupture and KT has been reported to be ranging from 3 to 30 days. Acute rejection is the commonest cause of kidney allograft rupture. Commonest symptom is sudden onset pain and tenderness over the site of the

graft kidney. Non-invasive imaging includes ultrasound or CT evaluation, which can confirm the diagnosis. Immediate surgical exploration is mandatory. With improved surgical technique, ruptured grafts can be salvaged with success rate up to 80%, although the risk of graft nephrectomy is still present.

CONCLUSION

Early accurate clinical assessment together with radiological investigation is crucial for the diagnosis of kidney allograft rupture before proceeding to immediate surgical exploration for definitive therapy.

Category: Doctor

Topic: Transplant

Session: E-Poster Display

Submission ID: 140

Abstract ID: MSN2023-PD116



TRANSIENT ELEVATED ALKALINE PHOSPHATASE IN POST CADAVERIC RENAL TRANSPLANT RECIPIENT: CASE REPORT

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INTRODUCTION

Transient hyperphosphatasaemia (TH) is characterized by isolated elevation of serum alkaline phosphatase without significant evidence of liver or bone pathologies which gradually resolved to normal levels within weeks or months. It is most common in young children or infancy but rarely occurs in adults. Few cases were reported in adult renal transplant recipients.

RESULTS

Hereby we present a case of 44 year-old lady who was detected to have asymptomatic raised alkaline phosphatase (ALP) after 3 months post cadaveric renal transplantation. The lady was diagnosed with end stage renal failure of unknown primary disease since 2006 and was on regular hemodialysis for 16 years prior to her successful cadaveric renal transplantation. She had history of parathyroidectomy in 2016. After transplantation, she receives immunosuppressive therapies comprised of tacrolimus, mycophenolate mofetil and prednisolone. Her initial 1-month post-transplant ALP was 119 U/L which was normal. However, ALP started to rise after 3 months post-transplant which was observed during follow up. It reached peak of 799U/L at 4 months post-transplant. She was otherwise asymptomatic without significant signs and symptoms suggestive of infections, malignancy, or gastrointestinal diseases. Repeated IPTH was 68.9pg/ml with normal calcium and phosphate levels. Ultrasound abdomen, infection workouts, malignancy and autoimmune workouts were unremarkable. Alkaline phosphatase electrophoresis was performed which revealed predominantly bone isoenzymes of 93% with liver isoenzymes of 7%. Bone scan revealed features suggestive of

metabolic bone disease. There was no evidence of hot spots suggestive of malignancy. She remained asymptomatic throughout follow ups. Subsequently, her ALP level reduced gradually and normalized at 9 months post-transplant.

CONCLUSION

The case report highlights the occurrence of benign transient hyperphosphatasaemia in adults, with renal transplantation. However, liver or bone diseases, malignancy and infection should be excluded in these susceptible individuals on immunosuppression before establishing the diagnosis of TH.

Category: Doctor

Topic: Transplant

Session: E-Poster Display

Submission ID: 46

Abstract ID: MSN2023-PD117



A STUDY ON ADHERENCE TO DIETARY AND FLUID RESTRICTIONS AMONG HEMODIALYSIS PATIENTS IN PRIVATE HEMODIALYSIS CENTRES KUALA LUMPUR MALAYSIA

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INTRODUCTION

Adherence to dietary and fluid restrictions is one of the contributors to the quality of life observed in patients with end-stage renal disease (ESRD) undergoing hemodialysis treatment. Interdialytic weight gain was used as indicator to describe the level of adherence to fluid restrictions and biomarkers of phosphate and potassium level as indicators for dietary restrictions. Therefore, the nurses and other healthcare providers need to play a vital role in facilitating the patients' treatment adherence. Statistically, a significant association between level of dietary adherence behaviour and age ($p < .00$) and a significant association between level of fluid adherence behaviour and treatment duration ($p < .01$) was found in this study.

CASE PRESENTATION

An observational study was conducted among consenting patients on HD for ≥ 3 months with criteria of age 18 to 65 years-old.

RESULTS

Of 132 participating patients, 53% were female and 47% were male with mean age of 49.05 ± 11.52 years, mean length of HD duration was 1.33 at a range of 1-5 years with 58.3% being diabetes and 30.3% were hypertension. The level of adherence to dietary and fluid restrictions was 45.5% - 50% good.

CONCLUSION

This study aimed to measure the level of adherence to dietary and fluid restrictions among hemodialysis patients. Results showed that patients were fair adherent, with a significant association between dietary adherence behaviour

and age and treatment duration. The Pearson correlation test also showed a strong relationship between IDWG and dietary and fluid adherence behaviour. Improvements in patient education and an adjustment in patient attitudes about the renal diet may enhance adherence. Self-efficacy and the idea of control are significant indicators of whether someone would follow dietary and fluid limitations.

Category: Paramedic

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 29

Abstract ID: MSN2023-PD118

DRUG-RELATED PROBLEMS ENCOUNTERED IN PATIENTS WITH END STAGE RENAL DISEASE IN MALAYSIA

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INTRODUCTION

Patients with end stage renal disease (ESRD) have multiple co-morbidities and are usually on 10 to 12 medications at a time. The complexity of their therapy predisposes patients with ESRD to drug-related problems (DRPs). To date, there is a paucity of data regarding DRPs experienced by patients with ESRD. The aim of this study was to determine the DRPs experienced by patients with ESRD.

CASE PRESENTATION

A multi-center, longitudinal study was conducted at the University Malaya Medical Centre dialysis unit and its affiliated centres, and the National Kidney Foundation Dialysis centres from May 2018 to August 2019. Patients aged at least 21 years old, who understood Malay and were on dialysis for at least three months were included. Patients with active cancer and who were intellectually disabled were excluded. Convenient sampling was used to recruit participants. For those that agreed to participate written informed consent was obtained. At recruitment, baseline clinical information was obtained. Participants were asked to bring their medications that they were taking at their next visit to the dialysis center so that a medication review could be conducted. They were then interviewed by a researcher to determine if they experienced any DRPs. All DRPs were recorded using the Pharmaceutical Care Network Europe DRP form.

RESULTS

August 2019. Patients aged at least 21 years old, who understood Malay and were on dialysis for at least three months were included. Patients with active cancer and who were intellectually disabled were excluded. Convenient sampling was used to recruit participants. For those that agreed to participate written informed consent was obtained. At recruitment, baseline clinical information was obtained. Participants were asked to bring their medications that they were taking at their next visit to the dialysis center so that a medication review could be conducted. They were then interviewed by a researcher to determine if they experienced any DRPs. All DRPs were recorded using the Pharmaceutical Care Network Europe DRP form.

Results: A total of 288 DRPs were detected from 137 patients (mean=2.1±1.2 DRPs per patient). The three most common DRPs reported were: patients did not take their medications as prescribed (90,31.3%), took less (55, 19.1%) or took more than prescribed (32,11.1%). The major cause of DRP was patient's refusal to take their medication (49,17.0%); followed by failing to follow instructions on how to take their medication (46, 15.9%) and taking more than instructed (40, 13.8%). Majority of the DRPs detected were informed to prescribers and 85.4% of patients were counselled on how to take their medications properly. A total of 47.9% interventions were not accepted by patients.

CONCLUSION

Patients with ESRD and on hemodialysis experienced a high amount of DRPs. This indicates the need for regular medication review by pharmacist in dialysis unit.

Category: Paramedic

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 56

Abstract ID: MSN2023-PD119



NEPHROTIC SYNDROME IN POST-THYMECTOMY PATIENTS WITH MYASTHENIA GRAVIS: A SINGLE-CENTRE CASE SERIES

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INTRODUCTION

The occurrence of nephrotic syndrome (NS) in post-thymectomy myasthenia gravis (MG) patients is rare. Akira Takahashi et al. had reported 24 biopsy specimens from patients with a history of thymoma and / or MG (0.07%), which showed a wide spectrum of kidney diseases involving glomerular and tubulointerstitial compartments, often with low-grade immune complex deposition. The histopathological findings are heterogenous, leading to different clinical outcomes.

CASE PRESENTATION

We wish to report three cases that we recently encountered.

RESULTS

The first case involves a 39-year-old lady, diagnosed with MG in 2006, who underwent thymectomy 2 years later. She presented with NS in July 2022 but referred 8 months later when she was pregnant at 18 weeks' gestation. A renal biopsy was performed which showed features of membranous nephropathy (MN). Anti-phospholipase A2 receptor (anti-PLA2R) antibody and other secondary workup were negative. She was managed as primary MN with steroid-based immunosuppression (IS) and is under ongoing follow-up.

The next case is a 67-year-old lady with MG, diagnosed in December 2018 with thymectomy subsequently done six months later. She presented with NS in July 2022. Similar to the first case, she was diagnosed with anti-PLA2R negative primary MN. Two months into IS

treatment, she unfortunately developed sepsis and succumbed to death.

The final case involves a 42-year-old lady with MG who underwent a thymectomy a year later in 2017. She developed NS almost 6 years after her operation. The renal biopsy showed features of primary focal segmental glomerulosclerosis (FSGS). Partial remission was achieved within 16 weeks of oral glucocorticoid monotherapy from which she developed complications of both infection and osteoporosis.

CONCLUSION

A high degree of clinical suspicion of NS is vital among post-thymectomy patients with MG. Further insights are needed to understand its natural history, pathogenesis and overall prognosis to define better patient outcomes.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 156

Abstract ID: MSN2023-PD12

HAEMOGLOBIN LEVEL DIFFERENCES BETWEEN DIALYSIS PATIENTS DEPENDING UPON THEIR FINANCIAL SPONSOR

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INTRODUCTION

Haemoglobin (HB) levels are a key medical outcome measure for assessing quality in the provision of dialysis. Off target haemoglobin levels are also associated with worse outcomes in the dialysis patient population. In DaVita, patient haemoglobin levels are targeted to attain between 10 to 12g/dL via the use of erythropoietin stimulating agents (ESA) as well as iron supplementation.

Unfortunately, appropriate dosing of ESA is dependent upon the financial capability of either the patient or the sponsor of the patient. As an example, patients under the Malaysian Civil Service Administration (JPA) are fully sponsored for erythropoietin use whilst other sponsors like the Malaysian Social Service Organization (SOC SO) are only partially subsidized.

The objective of this study was to determine the differences between haemoglobin levels depending comparing different sponsors.

CASE PRESENTATION

This was a cross sectional study of chronic dialysis patients dialyzing at the Malaysian DaVita clinics from January 2023 till February 2023. Patients were recruited if they had dialyzed for more than 90 days with DaVita. Lab results and dialysis care was obtained via patient medical records. Patients were selected if their sponsor was the Malaysian Civil Service Administration (Jabatan Perkhidmatan Awan, JPA,) or if the sponsor was the Malaysian Social Service Organization (SOC SO).

RESULTS

SOC SO patients had higher numbers of patients with HB levels < 10 (43.55%) while 42.15% of patients had HB levels at goal (HB 10-12g/dL). Amongst JPA patients, only 21.75% had HB < 10 whilst 59.5% of patients had HB levels at goal. Average EPO use by SOC SO patients who had HB < 10 was 7.8 injections / month. Average EPO use by JPA patients who had HB between 10-12g/dL was 11.45 injections / month; a difference of 3.65 injections / month

CONCLUSION

Differences between HB levels can result in large impact to medical outcomes including survival and hospitalization. The differences in HB levels can be a direct result of inadequate erythropoietin which in itself is a result of differences in financial ability to pay. However, the difference between amount of erythropoietin injections needed by the SOC SO group to attain the target amount of HB is not large. There should be a concerted effort by the nephrology community to push for increased sponsorship to address this gap in care.

Category: Paramedic

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 181

Abstract ID: MSN2023-PD120

PERCEIVED SOCIAL SUPPORT, SELF-EFFICACY, AND QUALITY OF LIFE AMONG CHRONIC KIDNEY DISEASE PATIENTS UNDERGOING HAEMODIALYSIS

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INTRODUCTION

Haemodialysis is one of the renal replacement therapies for chronic kidney disease (CKD) that affects the quality of life of the patients. Perceived social support, self-efficacy, and quality of life are important factors in facilitating and maintaining their health and reducing mortality among dialysis patients, irrespective of clinical psychological conditions.

This study aims to assess the quality of life and its association with perceived social support and self-efficacy among chronic kidney disease patients undergoing haemodialysis.

CASE PRESENTATION

The cross-sectional study was conducted using a self-administered questionnaire, which took place at seven public hospitals in Negeri Sembilan. The study recruited 390 patients undergoing chronic haemodialysis who met the eligibility criteria. Data was collected after obtaining approval from MREC, Ministry of Health. The instruments used were the Chronic Kidney Disease Self-Efficacy (CKD-SE) Scale, Multidimensional Perceived Social Support Scale (MPSP) and Kidney Disease Quality of Life (KDQOL-36TM). Data was analyzed using SPSS Version 26. Descriptive statistics and Hierarchical Multiple Regression also was performed to determine the relationship of the variables in data analysis.

RESULTS

Almost half of the participants (47.4%) were aged more than 60 years had received haemodialysis.

The self-efficacy had the highest mean score (99.85 ± 12), followed by quality of life (75.09 ± 10.82), and perceived social support obtained the lowest mean score (62.76 ± 11.18). Half of the participants (53.8%) had moderate level of quality of life. The Hierarchical multiple regression analysis revealed that a significant association ($p < 0.5$) was found between self-efficacy, gender, education, dialysis adequacy, duration of haemodialysis and quality of life. However, there were no relationship between perceived social support and quality of life which contradict with the previous study which showed the positive relationship between perceived self-efficacy, social support and quality of life among CKD patients.

CONCLUSION

Self-efficacy had an empowerment role compared with perceived social support in quality of life among patients receiving haemodialysis. The relationship between quality of life, self-efficacy and perceived social support revealed a necessity for healthcare professionals to have effective strategies to improve self-efficacy, social support and thus promote good quality of life. When there is a good self-efficacy, a positive effect on the social support system and good quality of life, it will also improve the long-term patient survival outcome.

Category: Paramedic

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 53

Abstract ID: MSN2023-PD121



SPIRITUAL NEEDS FOR MUSLIM PATIENTS WITH CHRONIC DISEASE: A SCOPING REVIEW

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INTRODUCTION

Chronically sick people often turn to religious or spiritual practices as a means of coping with their condition. Islam views spirituality as a source of peace and flexibility. Knowing the significance of humanity and man's place in God's plan are two of the most vital aspects of spiritual requirements.

CASE PRESENTATION

This scoping review uses PubMed, Scopus, Wos and ScienceDirect to gather all relevant English-language research published between 2012 and 2021. This study reviewed the nursing literature relevant to Islamic religious and spiritual needs for Muslims patients with chronic disease. The authors reviewed each selected study independently and assessed the study carefully to avoid discrepancies until a consensus was reached. From the abstracts of 1250 publications found via the database search, irrelevant papers were removed. After removing duplicates, we screened the remaining 424 publications using their entire texts and eventually settled on 12 articles.

RESULTS

In general, there were 5 qualitative investigations, 6 quantitative studies and 1 mixed-method study. The research focuses on the spiritual requirements of Muslims suffering from chronic diseases. Overall, the research in the present scoping review revealed that spiritual demands, such as the desire for love and hope, as well as the need for forgiveness and meaning, might arise during a moment of spiritual distress.

The relaxation reaction elicited by reciting salat, zikr or the Holy Quran. As a result, when all of these factors are coupled with a relatively basic mental concentration, there are several long-term health and well-being advantages. They lead to the power of self-care and healthful activities that people may conduct for themselves. Patients are taught to utilise their ideals, beliefs and feelings to enhance their bodies. Du'a helped patients with their emotional and spiritual requirements.

CONCLUSION

Results from this scoping study may help Muslims patients living with chronic conditions improve their quality of life and find spiritual fulfilment. Exposure to Holy Quran recitation and spiritual care has been evidenced as a practical non-pharmacological interventions. The findings demonstrates spiritual requirements as one primary resources of changing and dealing with stressful conditions, such as managing a chronic disease.

Category: Paramedic

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 81

Abstract ID: MSN2023-PD122

RAMADAN-INDUCED NUTRITIONAL CHANGES AMONG MAINTENANCE HEMODIALYSIS PATIENTS: AN INTEGRATIVE DIETARY PATTERN ANALYSIS USING POSTERIORI AND HYBRID METHODS

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INTRODUCTION

Ramadan month is postulated to bring profound dietary changes that caused a great concern for hemodialysis (HD) patients particularly among Muslim majority countries. However, there are scarce evidence that describe dietary patterns and nutritional changes following Ramadan fasting practice among this population. Therefore, we sought to identify specific dietary patterns during Ramadan and investigate its association with nutritional parameters.

CASE PRESENTATION

This was a multi-center prospective observational study in which a total of 102 Muslims patients undergoing HD session thrice weekly who planned to fast during Ramadan were recruited. Nutritional and functional status assessments were carried out two weeks prior and at the fourth week of Ramadan. Nutritional parameters comprise anthropometry, biochemical data, clinical, dietary intake and handgrip strength were included. Dietary patterns (dp) were derived through principal component (PC) analysis and reduced rank regression (RRR). The changes of nutritional parameters were examined for associations with specific dietary patterns using General Linear Model (GLM).

RESULTS

Five dietary patterns emerged, namely, "Home Food" (PC-dp1), "Meat Fat" (PC-dp2), "Oily Rice & Noodle" (PC-dp3), "Ramadan Traditional" (PC-dp4), and "RRR-Ramadan Modern" (RRR-dp). The highest tertile (T3) of PC-dp1 significantly ($p < 0.01$) associated with higher intakes of total protein, total potassium and total fluid but lower phosphate:protein ratio, whilst T3 of RRR-dp had significantly ($p < 0.01$) higher intakes of total carbohydrates, total fat, total phosphate and phosphate:protein ratio. T3 RRR-dp patients had a greater increment of serum potassium, serum phosphate during Ramadan. Similarly, T3 PC-dp2 observed a greater elevation of serum phosphate.

CONCLUSION

Dietary pattern during Ramadan the comprise the intake of processed meat and fast food, Ramadan finger food and refine grains, which closely resembles the structure of the Western dietary pattern, are associated with poor nutritional indicators, whilst, home-cook diet inclusive of well-balance food choice is associated with non-detrimental nutritional changes among this population.

Category: Paramedic

Topic: Nutrition

Session: E-Poster Display

Submission ID: 50

Abstract ID: MSN2023-PD123



UNDERSTANDING ADHERENCE TO DIETARY RECOMMENDATIONS AMONG HAEMODIALYSIS PATIENTS IN KLANG VALLEY

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INTRODUCTION

Adherence to dietary recommendations is essential for haemodialysis (HD) patients' clinical outcomes and survival. In Malaysia, a significant percentage of HD patients do not adhere to their dietary recommendations. Limited research has been conducted to identify factors contributing to this lack of adherence. This study aimed to evaluate the dietary adherence rate, understand socio-demographic factors influencing adherence, and explore coping strategies used by patients.

CASE PRESENTATION

This study involved 174 medically stable patients from five HD centres in the Klang Valley. Socio-demographic information and 3-day dietary recalls were collected, and 11 participants were selected to complete an additional in-depth interview to gain a better insight of their dietary habits.

RESULTS

The results showed that the participants had a mean age of 60 ± 13.3 , with 51.1% males and 60.9% Chinese. 63.2% had lower secondary education or below, and 55.2% were married. Most of the participants were not working (81%), living with family (94.3%) and had been on HD for less than 10 years (79.9%). The diet adherence rates were low, ranging from 11.5% for energy to 60.9% for sodium, with a mean BMI of 23.9 ± 4.4 . Significant differences ($p < 0.05$) were found between dietary intake and gender, educational level, employment status, living conditions, and food acquisition (eating out versus home

cooking). The dietary adherence varied among patients, influenced by disease awareness, acceptance, relationships with healthcare providers, and support from families and significant others.

CONCLUSION

This study underscores the importance of implementing measures to enhance the diet adherence of haemodialysis patients in Malaysia. Approaches such as the participation of family members, tailored consultations, and peer monitoring initiatives could be valuable in encouraging better diet adherence. Additional research in this field can provide insights to create targeted interventions that can enhance haemodialysis patients' clinical outcomes.

Category: Paramedic

Topic: Nutrition

Session: E-Poster Display

Submission ID: 70

Abstract ID: MSN2023-PD124

DEVELOPMENT AND VALIDATION OF A KNOWLEDGE, ATTITUDES AND PRACTICES (KAP) QUESTIONNAIRE ON CHRONIC KIDNEY DISEASE (CKD) IN MALAYSIA

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INTRODUCTION

Chronic kidney disease (CKD) is a leading public health problem in Malaysia. The assessment of knowledge, attitude and practice (KAP) on CKD allows more targeted and effective treatment of patients. Development of a locally validated KAP questionnaire is crucial and it enables comparison of practice and outcomes between different centres. This study aimed to develop and validate a questionnaire to assess the KAP on CKD among Malaysian patients.

CASE PRESENTATION

Phase 1: An initial English questionnaire, containing 43 close-ended and Likert-scale questions was developed.

Phase 2: The questionnaire was translated into Malay language and pre-tested for content validity. Phase 3: Adult patients with hypertension and/or diabetes mellitus were recruited for construct validity and reliability (internal consistency and test-retest reliability) tests.

RESULTS

A total of 145 patients completed the questionnaire; 40 (27.6%) answered the re-test questionnaire post 4-weeks. Majority of the respondents were female (51.0%) with secondary education (60.7%), Malay (67.6%), unemployed (71.0%) and with median age of 60 (IQR: 49.0, 67.5) years. Patients were hypertensive (91.0%), diabetic (68.3%) and had CKD (44.8%).

The final validated questionnaire contained 10 and 8 questions on knowledge and attitude about CKD, respectively. Eight questions evaluated the respondents' practice on self-management. Majority identified hypertension (63.4%) and diabetes mellitus (74.5%) as causes of CKD. However, 36.6% answered that diabetic medications can damage the kidneys. One third of the respondents self-checked blood pressure and sugar regularly. About 42.8% sometimes missed medications due to forgetfulness.

Exploratory Factor Analysis (EFA) (in assessing construct validity) extracted 11 questions into 4 constructs. There was a substantial correlation in the data, with Kaiser-Meyer-Olkin measure of 0.618. The overall internal consistency was reported as moderate (Cronbach's Alpha=0.61) whereas test-retest reliability analysis as defined by intra-class correlation (ICC) were moderate to excellent.

CONCLUSION

The validated KAP-CKD questionnaire is a useful tool in the management of CKD.

Category: Paramedic

Topic: Others

Session: E-Poster Display

Submission ID: 34

Abstract ID: MSN2023-PD125



PREVALENCE OF URINE ABNORMALITIES AMONG ADULTS IN MALAYSIA, 2011-2020

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INTRODUCTION

Urinalysis is a valuable screening tool to identify urine abnormalities for early detection of potential medical illnesses including chronic kidney disease (CKD). Abnormal urine can be characterized by elevated levels of protein, blood, and glucose. However, there are few studies on its occurrence in this country's adult population. Therefore, this study aims to assess the prevalence of urine abnormalities among adults in Malaysia.

CASE PRESENTATION

Based on National Kidney Foundation Malaysia's (NKF) health screening program from 2011 to 2020, 537,408 secondary data were obtained and studied retrospectively. Of those, only 525,531 were eligible for analysis. In addition to the general prevalence of urine abnormalities, further analysis was conducted according to age and ethnicity. The age cutoff between young and older adults was 40 years old.

RESULTS

The study participants had a mean age of 41.6 years old. The majority of them were Malay (71.3%), followed by Chinese (19.2%), Indian (7.5%), and Others (2.1%). From 2011 until 2020, proteinuria (≥ 10 mg/100 mL) increased from 2.7% to 10.1%. However, the prevalence of hematuria (≥ 10 red blood cells/uL) from 2011-2016 was $\leq 4.1\%$ before escalating sharply to 11.1% by 2020. Glucosuria (≥ 100 mg/100 mL) increased from 6.7% in 2011 to a peak of 9.2% in 2015 before declining to 7.4% by 2020. Indians had the highest mean of glucosuria (10.5%) among other ethnicities, while proteinuria was notable among Malays and Indians, with a mean equal rate of 5.6%. Chinese displayed the highest

average occurrence rate of hematuria at 6.1%. Overall, adults aged 40 and over exhibit a higher prevalence of urine abnormalities than younger adults.

CONCLUSION

This research proposes a noteworthy increase in urine abnormalities among Malaysian adults. Hence, it highlights the importance of early health screening and provides targeted health awareness to avert medical conditions such as CKD.

Category: Paramedic

Topic: Others

Session: E-Poster Display

Submission ID: 41

Abstract ID: MSN2023-PD126

THE NKF CHRONIC KIDNEY DISEASE EDUCATION PROGRAM (CKDEP): PROGRAM DESIGN AND PRELIMINARY RESULTS.

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INTRODUCTION

Chronic kidney disease (CKD) is a global public health problem. The prevalence of CKD in Malaysia has increased from 9.1% in 2011 to 15.5% in 2018. One of the objectives of the National Action Plan for Healthy Kidneys (ACT-KID 2018 - 2025) is to establish a sustainable multidisciplinary collaboration and community health approach to meet the needs of CKD patients. In 2021, the National Kidney Foundation (NKF) of Malaysia launched a chronic kidney disease education program (CKDEP). It is a community-based education program led by renal nurses and dietitians, aimed at providing comprehensive and free-of-charge clinical care services for CKD patients.

This report aims to detail the clinical characteristics of CKDEP participants and discuss the potential role of the interdisciplinary care model in improving patients' health outcomes.

CASE PRESENTATION

This study piloted CKDEP in Ipoh and Selayang, collecting patient data referred by hospitals, primary care clinics, and dialysis centres. Pre- and post-counselling evaluated knowledge and service efficacy. The analysis utilized simple descriptive statistics in an Excel spreadsheet, with results presented as percentages and frequencies.

RESULTS

From June 2021 to December 2022, 68 new cases were received. The mean age was 60±15, with 63% males and 61.7% Chinese patients. Most patients were in CKD stages 4-5 (57.4%), followed by 32.3% in stage 3 and 10.3% in stage 2. About 85% of patients had hypertension, while 57% were diabetic. The reasons for referral included dietary advice (70.5%), renal replacement therapy counselling (53%), education on self-management (33.8%), and medication advice (1.5%). 76.5% and 14.7% of the participants reported a 20-30% and 40% improvement in knowledge post-counselling, respectively.

CONCLUSION

Community-based CKDEP interventions seem feasible and may enhance CKD care. Long-term follow-up is required to assess clinical outcomes and identify the most effective interventions for optimal care.

Category: Paramedic

Topic: Others

Session: E-Poster Display

Submission ID: 40

Abstract ID: MSN2023-PD127

THE ROLES OF THE INTERLEUKIN-6 (IL-6) AND INTERFERON-ALPHA (IFN- α) IN SYSTEMIC LUPUS ERYTHEMATOSUS

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INTRODUCTION

SLE is an autoimmune disease characterised by loss of B cell tolerance resulting in autoantibody production. Many biomarkers have been implicated in the major pathway of its aetiopathogenesis but data on IL-6 and IFN- α have been inconsistent. This study aimed to investigate the significance of IL-6 and IFN- α levels in lupus nephritis and its association with disease activity.

CASE PRESENTATION

This was a cross-sectional study of systemic lupus erythematosus patients who attended the nephrology and rheumatology clinic follow-up. We recruited 15 active renal SLE patients who were matched control (age and gender) with 15 renal SLE in remission and 15 non-renal SLE. Their demographic profile, routine blood and urine test were collected. Disease activity index was calculated using SLEDAI 2K score and serum IL-6 and IFN- α were analysed. Post hoc Jonckheere-Terpstra test was used to determine the significance of IL-6 and IFN- α with disease activity.

RESULTS

All 3 groups were comparable in age and disease duration with mean age and disease duration was

35.09 (10.11) years and 10.71(6.67) years respectively. As expected, those with active renal SLE had significantly higher SLEDAI scores ($p < 0.001$), lower serum albumin ($p < 0.001$), and higher urine PCI ($p < 0.001$). Serum complements 3 and 4 were lower in active renal SLE and normal in the other two arms ($p < 0.001$). Serum IL-6 was higher in renal SLE regardless of their disease activity compared to non-renal involvement with median IL-6 of 25.91(6.53-48.4) pg/mL, 23.26(4.49-38.2) pg/mL and 11.25(2.01-31.22) pg/mL respectively ($p = 0.023$). A similar trend was also seen with IFN- α which was higher in renal SLE compared to those with no renal involvement with a median of 63.08(16.49-93.07) pg/mL, 60.38(11.54-105.87) pg/mL and 17.81(5.96-80.7) pg/mL respectively ($p = 0.037$). There was a moderate positive correlation between plasma levels of IL-6 ($p = 0.023$, $r = 0.339$) and IFN- α ($p = 0.037$, $r = 0.272$) with SLEDAI-2K scores. Both IL-6 and IFN- α were significantly different between disease groups. Post hoc test showed there was a significantly higher trend of median IL-6 and IFN- α scores with higher levels of SLE disease activity, TJT = 195.00, $p < 0.003$.

CONCLUSION

IL-6 and IFN- α levels were elevated in both active and remissive lupus nephritis and they correlated with disease activity.

Category: Paramedic

Topic: Others

Session: E-Poster Display

Submission ID: 67

Abstract ID: MSN2023-PD128

DOSE EQUIVALENCE BETWEEN EPOETIN BETA (RECORMON®) AND METHOXY POLYETHYLENE GLYCOL-EPOETIN BETA (MIRCERA®) AMONG PERITONEAL DIALYSIS PATIENTS (DEREMIR): PRELIMINARY DATA

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INTRODUCTION

Methoxy polyethylene glycol-epoetin beta (Mircera®) is a long-acting erythropoiesis stimulating agent which allows for once monthly dosing. To date, dose conversion ratio (DCR) from short-acting epoetin to Mircera® had been studied only in paediatric hemodialysis population. DCR data has been scarce for adult hemodialysis and peritoneal dialysis (PD) patients. Hence, the current study aims to determine the DCR between Recormon® and Mircera® in adult Malaysian PD patients.

CASE PRESENTATION

DEREMIR is a prospective, single-arm, 6-month follow-up study conducted in a PD center in Malaysia. PD patients who were receiving Recormon® and had stable hemoglobin (Hb) levels were converted to Mircera® according to the dose conversion provided by the manufacturer. The dosage of Mircera® was adjusted to maintain Hb levels between 10–12 g/dL. DCR of Recormon® (IU/week) to Mircera® (µg/month) was calculated at month-6.

RESULTS

Up to April 2023, 39 patients have completed the study. The mean age was 55±16 years with dialysis vintage of 34 (interquartile range [IQR]

40) months. Thirty-three (84.6%) patients started Mircera® at 120 µg/month and 6 (15.4%) patients at 200 µg/month. The median number of Mircera® dose adjustment was 1.0 (IQR 2.0). Twenty-eight (71.8%) patients required dose adjustment at least once over the 6-month period. The final Hb was 10.7±1.6 g/dL, which was not significantly different from the baseline Hb of 11.2±0.6 g/dL (95% confidence interval of Hb decline -0.01 to 1.02, P=0.06). Intra-patient Hb varied by 2.3±1.0 g/dL over the 6-month period. Eight (20.5%) patients had Hb above 13 g/dL and none had Hb below 8 g/dL upon conversion to Mircera®. The median Mircera® dose at month-6 was 150 (IQR 125) µg. The DCR of Recormon® to Mircera® at month-6 was 31.67 (IQR 23.2).

CONCLUSION

In PD patients, Hb remained stable upon switching from Recormon® to Mircera® with a DCR of 31.67.

Category: Paramedic

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 36

Abstract ID: MSN2023-PD129



OBESITY AND FOCAL SCLEROSING GLOMERULOSCLEROSIS

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INTRODUCTION

Glomerular disease in obese patient is usually associated with FSGS. In this study, we attempt to look at clinical features of obese patients with FSGS and significant factors that affect outcomes and management in comparison with non – obese FSGS cohort.

CASE PRESENTATION

A retrospective single centre study of all patients who had undergone renal biopsy in Hospital Serdang and had documented diagnosis of FSGS from January 2007 until December 2022. Obesity was defined as BMI \geq 25kg/m². Data was collected and analysed using SPSS version 17.

RESULTS

From 102 FSGS patients, obesity was seen in 65 patients. In these patients, 51% were female and 51% were primary FSGS. 46% had hypertension, 15% had diabetes and 45% were being treated for hypertension. 6 patients had family history of renal disease. 43% had haematuria of 1+ or more, 48% had acute kidney injury at diagnosis and 29% had doubling of serum creatinine at end of follow up. 18.5% developed end stage renal disease while 46% maintained normal kidney function. 72% were on steroids with 47% developing steroid related complications. The most common steroid complication being Cushingoid appearance. 41% were on second line immunosuppressant with cyclosporine and azathioprine being the most frequently used. 48% of females were detected during pregnancy with 95% detection of proteinuria in antenatal period. Conversely, presence of obesity did not significantly change usage of steroids in the management of patients, nor did it increase the incidence of steroid related complications

compared to the non-obese cohort. There was no difference between eGFR at end of follow up, doubling of serum creatinine at end of follow up or development of CKD between obese and non – obese groups of FSGS patients.

CONCLUSION

This study illuminates the clinical features of FSGS in obesity. In comparison with non – obese FSGS, there were no differences in renal outcomes.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 139

Abstract ID: MSN2023-PD13

SUCCESSFUL TREATMENT OF PERITONEAL DIALYSIS-RELATED FUNGAL PERITONITIS WITH INTRAPERITONEAL AMPHOTERICIN B AND INTRACATHETER FIBRINOLYTICS: A CASE SERIES.

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INTRODUCTION

Fungal peritonitis (FP) is an uncommon complication of peritoneal dialysis (PD) and is associated with high mortality and technique failure rate. The optimal treatment for FP is still not well established. This study aims to investigate the role of intraperitoneal (IP) amphotericin B and intracatheter (IC) fibrinolytics in treating FP.

CASE PRESENTATION

This is a case series on PD patients who were diagnosed with FP and were treated with IP amphotericin B and IC alteplase 5 mg and/or urokinase 60,000 IU in combination with systemic antifungal agents between February 2022 and March 2023.

RESULTS

During the study period, 3 FP cases were diagnosed. Case 1 was a 58-year-old Chinese man who had *Candida parapsilosis* isolated from the peritoneal dialysate sample. Case 2 was a 34-year-old Malay man with *Aspergillus niger* isolated from the peritoneal dialysate sample. Case 3 was a 61-year-old Malay lady who had *Candida orthopsilosis* identified from the peritoneal dialysate sample. All 3 cases were treated with 3-week antifungal regimen which included IP amphotericin B, oral flucytosine and intravenous (IV) amphotericin B or IV anidulafungin. Case 1 was given 1 dose of IC urokinase followed by 3 doses of IC alteplase on 4 consecutive days. Case 2 received 2 doses of

IC urokinase followed by 4 doses of IC alteplase at 1–2 days interval. Two doses of IC alteplase were given 1 week apart to case 3. IC fibrinolytics were locked for 2–4 hours. Up to May 2023, Case 1, 2 and 3 have been free from relapsing/repeat FP for 15, 8 and 2 month(s), respectively. None of the patient developed chemical peritonitis with IP amphotericin B.

CONCLUSION

This study demonstrates that IP amphotericin B and IC fibrinolytics in combination with systemic antifungal agents have the potential to cure FP in PD patients.

Category: Paramedic

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 38

Abstract ID: MSN2023-PD130



PATTERN OF GLOMERULAR DISEASE AMONG PATIENTS IN A SUBURBAN HOSPITAL AND ITS CLINICAL SYNDROME

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INTRODUCTION

Glomerular disease (GD) is a common cause of chronic kidney disease. The Seventh Malaysian Registry of Renal Biopsy (MRRB) report had reported the characteristics of glomerular disease nationwide in 2020. Nevertheless there's paucity of data to describe our regional population.

CASE PRESENTATION

We analysed 66 cases of native kidney biopsy-proven GD through medical record over a period of 3 years from January 2020 to December 2022 in Hospital Kulim, Kedah in a retrospective manner.

RESULTS

The mean age of patients was 32, with 59% are female. 88% are Malay ethnics, while Chinese and Indian are 6% respectively. Nephrotic syndrome (40%) is the most common presenting clinical syndrome, followed by asymptomatic urine abnormalities (30%), nephritic syndrome (21%) and nephritic- nephrotic syndrome (9%). 55% patients had primary glomerulonephritis (GN), however lupus nephritis (LN) was the most frequent biopsy- proven GN in this study, which was 27%. The most frequent primary GN are both focal segmental glomerulosclerosis (FSGS) and minimal change disease (MCD), each accounts for 33%, followed by IgA nephropathy 17%, membranous nephropathy 14% and membranoproliferative GN 3%. Among secondary GNs, LN represents 60%, followed by diabetic kidney disease 37% and post infectious GN 3%.

CONCLUSION

The pattern of glomerular disease in our regional population was generally consistent with national

data from MRRB 2020. Lupus nephritis is still the most frequent biopsy- proven causes of glomerulonephritis locally, which suggests prompt interventions and treatment to improve outcome.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 39

Abstract ID: MSN2023-PD14

RENAL OUTCOME OF PROLIFERATIVE LUPUS NEPHRITIS: A SINGLE CENTRE EXPERIENCE

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INTRODUCTION

Lupus nephritis (LN) is common in systemic lupus erythematosus (SLE) and the proliferative group shows higher morbidity. We have audited the renal outcome of our patients who had their renal biopsy done 2016-2021 and aim to identify variables that help in prognostication.

CASE PRESENTATION

34 patients (out of 288 patients screened) were identified and had their medical records reviewed retrospectively. Data collected were analyzed using Number Analytics.

RESULTS

These patients had a mean age of 28.62 at diagnosis, 88.24%(n=30) are female while 11.76%(n=4) are male. The median follow up duration was 5 years, and median baseline eGFR 81.5ml/min/1.73m². 52.94%(n=18) of them were class III+/-V while 47.06%(n=16) were class IV+/-V based on revised ISN/RPS classification 2018.

55.9%(n=19) of patients received mycophenolic acid (MPA) for induction whereas 38.24%(n=13) received IV cyclophosphamide (CYC). 2 patients (5.88%) switched from MPA to CYC during induction due to compliance issues.

By 12 months, 44%(n=15) achieved complete remission, 23.53%(n=8) in partial remission while 32.35%(n=11) wasn't in remission. At the end of data collection 1 patient (2.94%) passed away, while 7 patients (20.59%) developed ESRD. 29.4% of patients (n=10) had disease progression (eGFR <60ml/min/1.73m² >3 months). Variables that correlate with ESRD development are NIH chronic index (P=0.0296) and failure to achieve

remission by 12 months (P=0.026). Those who changed their induction agent also had a higher risk of ESRD (P=0.048). Patients who developed disease progression share the same risk factors with those who get into ESRD.

Otherwise there wasn't any correlation between numbers of renal flare versus any other variables including our primary outcomes.

CONCLUSION

Proliferative LN patients with higher NIH chronic index and those who failed to achieve remission by 12 months had higher risk of disease progression and ESRD. Higher ESRD rate in those with changes in induction agent might be related to compliance issues in general.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 60

Abstract ID: MSN2023-PD15



SEVERE LUPUS NEPHRITIS, BETTER LATE THAN NEVER

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INTRODUCTION

Kidneys are commonly affected in systemic lupus erythematosus. The renal prognosis in proliferative glomerulonephritis is poor and 10% will progress to end stage kidney disease (ESKD) within 5 years. Some centres have published that if patients were biopsied at eGFR < 60 ml/min/1.73m², 17% will develop ESKD. The debate remains how long should we wait before labelling these group of patients as ESKD and what is the appropriate duration of immunosuppressant before deciding to back down?

CASE PRESENTATION

We report a case of severe lupus nephritis who showed renal recovery after dialysis dependent at week 68.

RESULTS

41 years old gentleman with no known medical illness, presented with bilateral lower limbs swelling, maculopapular rashes over face for one-week duration. Physical examination showing bilateral pitting oedema, and macular rashes over face. Initial blood investigations showed bicytopenia (thrombocytopenia and leukopenia), deranged kidney function, hypoalbuminemia, proteinuria, microscopic haematuria with positive antinuclear antibody and hypocomplementemia. Intravenous Methylprednisolone pulse was given, and a renal biopsy showed lupus nephritis class IV with activity index 15/24, chronicity index 4/12. Unfortunately, his kidney function deteriorated and he required CAPD. His initial therapy was intravenous cyclophosphamide and subsequent maintained with mycophenolate mofetil and prednisolone. However, there was no sign of kidney recovery during induction. Repeated renal

biopsy performed at week 9 showed diffused proliferative glomerulonephritis with AI: 11/24, CI: 2/12 and subsequently 3rd renal biopsy at week 22 showed focal proliferative glomerulonephritis with AI: 8/24, CI: 4/12. We noted some renal recovery after 11 months. His 24 hours urine kidney function (mean of urea and creatinine clearance) at week 29, 6.7ml/min; at week 44, 19ml/min; at week 68, 18.8ml/min. He was then off CAPD and his creatinine remains static at 326 µmol/L with eGFR 19 ml/min/1.73m².

CONCLUSION

Our patient had sufficient renal recovery after 1 year to stop dialysis. Regular monitoring of residual renal function and serial renal biopsy can be useful.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 91

Abstract ID: MSN2023-PD16



STEROIDS FREE REGIME IN PRIMARY MEMBRANOUS NEPHROPATHY – A CASE SERIES

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INTRODUCTION

Primary membranous nephropathy (PMN) is a common cause of nephrotic syndrome in adults, characterized by thickening of the glomerular basement membrane due to the deposition of immune complexes. Traditional treatment involves a combination of steroids with another immunosuppressant, such as cyclophosphamide or calcineurin inhibitors. However, there is evidence to support a steroids-free approach to treat PMN, which can alleviate patients from steroids toxicity.

CASE PRESENTATION

This case series reports successful treatment of 8 PMN cases using a steroids-free regime consisting of low-dose rituximab or tacrolimus.

RESULTS

The 8 patients were aged between 37 to 80, with 5 males and 3 females, all presenting with nephrotic syndrome, and half having impaired kidney function. All patients were biopsy-proven, with 50% having positive PLA2R antibodies (57 to 1114 RU/ml). Steroids-free regime was chosen due to underlying diabetes (n=2), steroids intolerance (n=1), patients' preference (n=3), or advanced age (n=2). Four patients received low-dose IV rituximab (200mg every 2 to 3 weeks for 4 doses), of which 3 achieved partial remission within 6 months, and 1 had yet to come for a 6-month follow-up. Two patients received rituximab, followed by tacrolimus monotherapy. Both responded favourably with over 50% reduction in proteinuria after 3 months of tacrolimus treatment. The 2 patients treated with tacrolimus monotherapy had normalized serum albumin after 6 months, although the magnitude of proteinuria reduction was much lower, i.e., less than 30% reduction in 6 months. All patients had

stable or improved kidney function after initiating treatment.

CONCLUSION

Steroids-free regime consisting of low-dose rituximab or tacrolimus monotherapy is a feasible treatment option for PMN patients.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 30

Abstract ID: MSN2023-PD17



UNMASKING A FASCINATING LINK: BREAST CARCINOMA-TRIGGERED PARANEOPLASTIC LUPUS NEPHRITIS SHEDS LIGHT ON THE ENIGMATIC INTERSECTION OF AUTOIMMUNITY AND ONCOLOGY

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INTRODUCTION

Renal paraneoplastic disease has been documented in the literature, with glomerular diseases, specifically membranous nephropathy(MN) and minimal change disease(MCD), being the most common presentations in cancer patients. However, malignant tumors like breast cancer presenting with lupus nephritis are rare occurrences.

CASE PRESENTATION

We report a case of a 40-year-old female diagnosed with SLE and lupus nephritis after presenting with fever, joint pain, alopecia, and malar rash. Positive antinuclear antibody(ANA) and renal biopsy showing class IV lupus nephritis supported the diagnosis. An incidental breast lesion found during the onset of SLE led to the diagnosis of breast carcinoma in situ. The patient was treated with oral prednisolone and hydroxychloroquine(HCQ) and underwent left mastectomy. She achieved complete remission without additional immunosuppressive therapy.

RESULTS

This is a rare case of breast carcinoma, where the disease associated with proliferative lupus nephritis class IV. The course of LN in our patient is different from the commonly seen which requires immunosuppression with

cyclophosphamide or mycophenolate mofetil(MMF) to achieve remission. It is hypothesized that paraneoplastic rheumatological diseases may develop secondary to the anti-tumour immune response which evokes the production of autoantibodies against tumour antigens including self-antigens expressed by apoptotic tumour cells. The potential role of immune checkpoint inhibitors in the development of paraneoplastic rheumatological diseases should be considered which have revolutionized cancer treatment but have also been associated with immune-related adverse events, including the development of autoimmune diseases. In parallel to the reported cases, paraneoplastic rheumatological syndromes in our patient was improved with treatment of the underlying malignancy.

CONCLUSION

Paraneoplastic lupus nephritis should be considered in a scenario where there was a temporal relationship to cancer, remission after the cancer treatment, and relapse with cancer recurrence. The appropriate diagnosis is crucial to assist physicians in providing proper treatment and to prevent exposure to unnecessary side effects of immunosuppression.

Category: Doctor

Topic: Glomerulonephritis

Session: E-Poster Display

Submission ID: 68

Abstract ID: MSN2023-PD18



A CASE OF DUPLICATE SUPERIOR VENA CAVA

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INTRODUCTION

Internal jugular vein (IJV) vascular access for hemodialysis can be complicated in patients with anomalous vessel anatomy. Persistent left superior vena cava (PLSVC) is common thoracic venous anomaly, prevalence is 0.1-0.3% in the general population. The clinical significance of PLSVC depends on the drainage site. We present a case PLSVC detected following the placement of a hemodialysis catheter through the left IJV.

CASE PRESENTATION

We report a case of duplicate superior vena cava detected following the placement of a hemodialysis catheter through the left internal jugular vein.

RESULTS

A 61-year-old man with end-stage kidney disease (ESKD) was ongoing regular hemodialysis since 2018 via an arteriovenous fistula (AVF). He was admitted on 25/10/2022 for malfunctioning AVF and a right non-cuffed double-lumen internal jugular venous catheter (IJVC) inserted. On 6/11/2022, he was again admitted with a complaint of right IJVC dislodged.

We attempted to re-insert non-cuffed double-lumen dialysis catheter through the right internal jugular vein (IJV), however, we were unable to advance the guidewire. Hence a left IJVC was inserted. The chest radiograph revealed the catheter was on the left side of the cardiac silhouette.

We proceed with the contrast-enhanced computed tomography of the thorax and it revealed persistent left superior vena cava (PLSVC) type IIIb (present right and left superior

vena cava without connection) which drains into the left atrium. The catheter was then removed.

The following day, a double-lumen cuffed catheter inserted with fluoroscopy by intervention radiologist. The post-insertion chest radiograph shows the catheter's tip was on the right side of the cardiac silhouette.

CONCLUSION

The post-catheter insertion CXR showed catheter was on the left side of the cardiac silhouette should alert the clinician of PLSVC. An Angio scan is crucial in establishing the diagnosis.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 14

Abstract ID: MSN2023-PD19



A CASE SERIES OF OXIRIS ADSORPTIVE MEMBRANE USE IN CONTINUOUS RENAL REPLACEMENT THERAPY FOR SEVERE SEPSIS

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INTRODUCTION

Continuous renal replacement therapy (CRRT) is the commonest modality of renal replacement therapy (RRT) used in intensive care units (ICU) for critically ill patients with acute kidney injury or existing kidney failure. Non-renal indications of CRRT use in sepsis and other inflammatory conditions, though less established, were reported and postulated to improve outcomes. Hence, the use of adsorptive membrane in CRRT remains an adjunctive therapy rather than the standard intervention for better outcomes. There are limited literature and reports on adsorptive membrane use in CRRT in Malaysia.

CASE PRESENTATION

We conducted a descriptive study of 5 patients at a tertiary hospital, who were admitted to the ICU with sepsis and were treated with CRRT with oXiris adsorptive membrane. We aimed to review the baseline characteristics of those patients and their outcomes after CRRT with oXiris in terms of haemodynamic stability with reduction of vasopressor dosage, improvement in the sequential organ failure assessment (SOFA) score, and the trend of septic markers and cytokines.

RESULTS

Five cases of severe sepsis were treated with CRRT with oXiris adsorptive membrane. Among the five patients, 60% were male, with a mean age of 41±21 years. Two of them were end stage renal failure patients on long-term RRT. 80% of them had haemodynamic instability requiring

vasopressor, with a mean SOFA score of 12.8±4.6. The mean treatment duration was 32±23 hours. All cases had significant clinical improvement after CRRT with oXiris membrane.

CONCLUSION

CRRT with adsorptive membrane has shown good clinical outcomes in most patients with severe sepsis especially if the therapy lasted for at least 24 hours. Timely prescribed therapy with oXiris membrane is crucial in determining patients' outcome. Prospective case-control study is needed to further confirm the efficacy of adsorptive membrane in septic patients who require CRRT.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 24

Abstract ID: MSN2023-PD20

A RARE CASE OF FATAL HEPARIN INDUCED THROMBOCYTOPENIA TYPE 2 WITH THROMBOSIS

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INTRODUCTION

Heparin induced thrombocytopenia (HIT) is a rare complication of unfractionated heparin (UFH) therapy. We present a case of HIT Type 2 complicated with thrombosis, following exposure to UFH during haemodialysis.

RESULTS

67 years old Chinese lady with underlying type 2 DM, hypertension, and newly diagnosed ESKD since February 2023 who commenced haemodialysis. Patient underwent haemodialysis with free heparin on 3/2/2023 via uncuffed dialysis catheter and subsequent session on the 5,7 and 9/2/2023 with normal heparin. She was discharged from the ward on the 10/2/2023.

On 15/2/2023, she presented with 2 days history of right sided leg swelling and pain. Clinical examination revealed oedematous right lower limb with purpuric rashes throughout her right leg. Full blood counts showed leucocytosis with white cell count of 21000/mcL, Hb of 7.3g/dL and thrombocytopenia with platelet of 12000/mcL. Ultrasound doppler of right lower limb showed right lower limb DVT with extension up to right external iliac vein.

Patient was referred to haematology, 4T score showed high probability of HIT (Score 6). Anti PF4 antibody was sent, and patient was empirically treated for HIT type 2. She was given one dose of IV IG 20g (at 0.4g/kg), SC Clexane 40mg daily and subsequently switched over to oral Apixaban 2.5mg BD. Patient's right leg became mottled with paraesthesia and blistering. Surgical team diagnosed the patient as right lower limb venous ischemia. After kidney replacement therapy discussion, the patient and family decided for conservative management.

She suffered from an upper GI bleeding and succumbed on 22/2/2023. Her anti PF4 result came back positive.

CONCLUSION

Although rare, HIT with thrombosis carries high morbidity and mortality.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 126

Abstract ID: MSN2023-PD21

A REVIEW OF REGIONAL CITRATE ANTICOAGULATION USE IN CONTINUOUS RENAL REPLACEMENT THERAPY AT A TERTIARY CENTRE IN MALAYSIA

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INTRODUCTION

Regional citrate anticoagulation (RCA) is a method of anticoagulation specifically targeting the extracorporeal dialysis circuit by citrate infusion to chelate the ionized calcium, which is a key factor in the coagulation cascade. RCA increases haemofilter survival time with a lower bleeding risk as compared to the systemic heparin anticoagulation. RCA is recommended by the Kidney Disease Improving Global Outcomes (KDIGO) as the first-line anticoagulation in continuous renal replacement therapy (CRRT), however, this is not feasible in developing countries due to limited resources. To date, there is no real-time data of RCA use in Malaysia.

CASE PRESENTATION

We conducted a descriptive study of the use of RCA in CRRT at a tertiary hospital in Malaysia. We aimed to review the indications of using RCA with limited resources, duration of CRRT with RCA, and problems in handling the RCA.

RESULTS

There were 23 RCAs used in CRRT in our centre from 2019 to 2023. Among them, 69.6% were used as the primary anticoagulation in CRRT, half of which were due to the risk of bleeding. In general, CRRT with RCA was able to achieve a mean duration of treatment of 37.0±24.5 hours. Three cases with duration of less than four hours were due to poor catheter flow. Among the cases with RCA used after an early termination of CRRT due to clotting, RCA was able to prolong the

duration of treatment from 11.9±9.2 to 39.7±20.4 hours without complication.

CONCLUSION

CRRT with RCA is safe and can prolong the lifespan of dialysis circuit to ensure an effective therapy. A good vascular access is essential to guarantee the efficacy of RCA. Selective prescription of RCA in a setting with limited resources is crucial in determining patients' outcome. Prospective case-control study is needed to further confirm the efficacy and safety of RCA in CRRT.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 25

Abstract ID: MSN2023-PD22

A STUDY OF REGIONAL CITRATE ANTICOAGULATION FOR CONTINUOUS RENAL REPLACEMENT THERAPY (RCA-CRRT) ON ITS EFFICACY AND PATIENT'S OUTCOME IN A SINGLE CENTRE EXPERIENCE: A RETROSPECTIVE, OBSERVATIONAL STUDY

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INTRODUCTION

Regional citrate anticoagulation (RCA) in continuous renal replacement therapy is widely recommended as method of anticoagulation due to its advantage of prolonged filter lifespan. Despite its advantages, their use in Malaysian intensive care units are still less favoured thus limiting availability of local data on its efficacy.

CASE PRESENTATION

This is a monocentric, retrospective observational study in ICU setting of Hospital Kajang. Patients' demographics data spanning from 1st October 2020 until 31st December 2022 who received RCA-CRRT were collected. Filter lifespan, complications and patients' outcome were included. CRRT delivered in CVVHD-mode following standardized protocol.

RESULTS

48 patients with 56 CRRT sessions were included. They were 62.7% males and 37.3% females. The mean age was 54 (SD±16) years old. The median APACHE II was 22 (IQR 14) and SOFA score was 8 (IQR 7). 31.4% of the patients positive for COVID-19. The mean blood urea nitrogen, creatinine and serum lactate were 25 (SD±13.9), 419 (SD ±227) and 2.92 (SD±3.20) respectively. About 29 of mortalities (67.4%) were recorded while the other 14 (35.3%) were transferred out of ICU. There were 20 sessions (46.5%) of RCA-CVVHD completed and 8 sessions (18.6%) were stopped due to true filter clotting. Another 15 (34.9%) were interrupted due to interhospital transfer, imaging, surgical

operations or haemodynamic instability. Filter clotting occurred in 31.3% (n=5) of COVID-19 cases. In terms of complication of citrate overload, 18.6% (n=8) developed transient metabolic alkalosis while 46.5% (n=20) developed transient hypercalcemia (mean calcium level 2.89±SD 0.38) which resolved spontaneously in 24 hours post completion. Transient increment of T:I ratio (>2.50) was recorded in 16.3% (n=7) cases however does not fulfil criteria for citrate toxicity.

CONCLUSION

RCA provides good efficacy profiles for CRRT anticoagulation with transient reversible complications.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 83

Abstract ID: MSN2023-PD23



ACUTE ANGLE-CLOSURE GLAUCOMA FOLLOWING HAEMODIALYSIS EXPOSURE: A CASE REPORT

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INTRODUCTION

Haemodialysis (HD) has been associated with elevated intraocular pressure (IOP) leading to a condition termed ocular dialysis disequilibrium. Acute angle-closure glaucoma (AACG) namely, is a rare ocular emergency that has been reported complicating haemodialysis (HD) therapy which can result in permanent visual loss. Those at risk includes diabetic patients, age more than 40 and narrow anterior chamber angle.

RESULTS

We report on a rare case of 28-year-old lady who developed AACG following initiation of HD. She was admitted for a diagnosis of end stage renal disease (ESRD) due to missed glomerulonephritis. At presentation, her urea was 41 mmol/L and creatinine of 1422 µmol/L. She underwent her first HD session with the blood flow rate set at 180ml/min and dialysate flow rate of 300ml/min. She experienced persistent right-sided visual blurring and periorbital pain with associated headache and vomiting episodes immediately following HD. Her post dialysis urea and creatinine level were 29 mmol/L and 1019µmol/L respectively. The second HD session was after 2 days and her symptoms worsened of which she sought medical attention. Urgent ophthalmologist review demonstrated elevated initial intraocular pressures (IOP) at 50mmHg on

the right eye and 24mmHg on the left. Gonioscopy test confirmed a diagnosis of AACG. She received a single dose of acetazolamide followed by bilateral peripheral iridotomy and topical treatment included prednisolone, latanoprost and Simbrinza eye drops. Serial IOP measurement showed reduction of IOP to 15mmHg and remained normalised. She tolerated her dialysis subsequently at incremental setting.

CONCLUSION

This case highlights the incidence of hemodialysis-related elevation in intraocular pressure. It should be considered as a possible aetiology by clinicians in managing patients with ocular symptoms which necessitate urgent ophthalmic evaluation to prevent permanent visual loss. Additionally, early identification of high risk patients in particular will be useful as to adopt preventative measures.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 194

Abstract ID: MSN2023-PD24



BEYOND THE NEEDLE: NAVIGATING VASCULAR ACCESS OBSTACLES IN END-STAGE KIDNEY DISEASE PATIENTS - A UNIQUE PERSPECTIVE

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INTRODUCTION

Patients with situs inversus totalis experiencing renal failure face distinctive challenges due to the abnormal organ arrangement. The increased risks of vascular stenosis and thrombosis during dialysis are thought to be a result of altered blood flow patterns. Although the risk of infective endocarditis is low to moderate, it is crucial for healthcare professionals to remain vigilant in monitoring and addressing potential complications, ensuring the best possible health outcomes.

CASE PRESENTATION

A 19-year-old female with myelomeningocele and situs inversus totalis faces ESKD due to bladder dysfunction. Since her vascular access was unsuitable, she started hemodialysis with a right catheter(23cm). Unfortunately, she developed MSSA central line-associated bloodstream infection causing septic shock. CT and echocardiograms showed a 9-mm tricuspid vegetation near the cavoatrial junction. She was discharged with a 19cm left permanent catheter after six weeks of intravenous cloxacillin due to right vascular stenosis which made the difficulty insertion.

The patient has been scheduled for a centrovenogram prior to Left AV graft creation(brachio-axillary).

RESULTS

Patients with ESKD are at high risk for various vascular complications that can have significant repercussions if left untreated, and individuals

with situs inversus face even more challenges. Inserting a catheter in a patient with dextrocardia can be difficult and complex, potentially requiring specific maneuvers. Patients with situs inversus possess unique vascular anatomy that cannot be managed in the same way as a typical ESKD patient. Therefore, it is critical to employ sterile methods, select an appropriate catheter size and type, and utilize imaging tools like ultrasound or venography to guide insertion and minimize the risk of complications.

CONCLUSION

Managing renal failure in a patient with situs inversus totalis presents unique challenges. By understanding these challenges and implementing appropriate medical interventions, meticulous monitoring and management of these patients become essential to avoid problems, achieve the best possible outcomes, and prevent complications.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 63

Abstract ID: MSN2023-PD26

CHARACTERISTIC OF CKD PATIENTS ADMITTED FOR COVID-19 INFECTION IN KELANTAN

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INTRODUCTION

The coronavirus disease 2019 (COVID-19) had emerged as a significant healthcare burden globally. High risk group such as CKD patients were among those who required specialised care in hospital. This study aims to describe the characteristic of CKD patients admitted for COVID-19 infection.

CASE PRESENTATION

This is a retrospective cross sectional study involving CKD patients with COVID-19 infection from December 2020 to August 2021 admitted in two tertiary hospitals in Kelantan. Adult CKD patients (eGFR<60ml/min) with confirmed COVID-19 infection were included. Baseline demographic data, comorbidities, vaccination status and other clinical information were collected from electronic medical record. The data was analysed using SPSS Statistic version 26. Descriptive statistic was used to summarize the data.

RESULTS

A total of 140 patients who fulfilled study criteria were included for analysis. Patients were predominantly Malay (98.6%), male (53.6%) with mean age of 60.3 (SD=12.47) years old. There were 50 patients (35.7%) with end stage kidney disease (ESKD) on regular dialysis, followed by 30 (21.4%) CKD 4, 22 (15.7%) CKD 3B, 20 (14.3%) CKD 3A, and 18 patients (12.9%) with CKD 5. Common concomitant comorbidities were Diabetes Mellitus (70.7%), Hypertension (86.4%) and cardiac disease (20%). Only 23 patients (16.4%) completed two doses of vaccine upon admission. Majority were admitted with COVID-19

category 4 (47.2%) and category 3 (37.7%). Mean duration of stay was 6 days (SD=4.79) and 20% of them required ICU admission. Complications were common with significant proportion had secondary bacterial infection (72.1%) and AKI on CKD (46.4%).

CONCLUSION

CKD patients are generally older age group with multiple comorbidities. Exposure to COVID-19 infection imposes detrimental health effect to them. This might explain the high rate of complications and ICU admission observed in this sample.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 127

Abstract ID: MSN2023-PD27



CLINICAL OUTCOME OF DOUBLE LUMEN TUNNELLED CUFFED HEMODIALYSIS CATHETER.

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INTRODUCTION

The coronavirus disease 2019 (COVID-19) had emerged as a significant healthcare burden globally. High risk group such as CKD patients were among those who required specialised care in hospital. This study aims to describe the characteristic of CKD patients admitted for COVID-19 infection.

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Mean duration of stay was 6 days (SD=4.79) and 20% of them required ICU admission. Complications were common with significant proportion had secondary bacterial infection (72.1%) and AKI on CKD (46.4%).

CONCLUSION

CKD patients are generally older age group with multiple comorbidities. Exposure to COVID-19 infection imposes detrimental health effect to them. This might explain the high rate of complications and ICU admission observed in this sample.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 180

Abstract ID: MSN2023-PD28



COMPARISON OF MEDICAL OUTCOMES BETWEEN PATIENTS USING ARTERIOVENOUS FISTULA AND DIALYSIS CATHETER.

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INTRODUCTION

Medical outcomes are important measures that lead to overall improvements of health. In dialysis, there are a number of outcomes that are of key importance. Delivery of adequate dialysis is an important outcome measure for end stage kidney disease patients. The best accepted marker for establishing dialysis adequacy is the use of the kt/v formula where k reflects dialyzer clearance, t reflects treatment time and v reflects the volume of distribution of urea. Target values of kt/v are generally accepted to be > 1.2. DaVita internally targets kt/v values of > 1.3 as a goal. It is widely accepted that the best access type to allow for an optimal kt/v is an arteriovenous fistula (AVF). However, many patients still do not dialyse using an AVF and instead rely on a temporary catheter for their access. In DaVita clinics, we target to have < 15% of our patients dialyzing via a catheter. Currently, 17% of DaVita patients are dialyzing via catheters. Other outcomes measures that make a difference to patients are achievement of haemoglobin values as well as hospitalization rates.

The objective of this study is to compare these medical outcomes measures between patients using an AVF for dialysis versus those using a catheter.

CASE PRESENTATION

This was a cross sectional study involving chronic dialysis patients who had been dialyzing for > 3 months. Patients were recruited from 6 DaVita community centres. Exclusion criteria were a record of hospitalizations within the last 3 months,

or any medical issue that the authors thought may impact kt/v independently. We used the Daurgirdas equation where $Kt/V = -\ln((\text{Post BUN}/\text{Pre BUN}) - 0.03) + (4 - 3.5 \times (\text{Post BUN}/\text{Pre BUN})) \times (\text{UF}/\text{Weight})$. Urea and Hemoglobin measurements were derived from the standard 3 monthly lab reports. Means were compared using the students t-test. Hospitalization information was derived from nursing notes.

RESULTS

81 patients who fit the criteria and who consented to participate were recruited. Of these, 53 patients were dialyzing via an AVF while 28 patients were dialyzing via a catheter. Average age was similar (48.9yrs in the AVF group, 49.7yrs in the catheter group). Patients on a fistula had better haemoglobin levels (10.9 vs 9.9) and significantly better kt/v results (1.48 vs 1.3, p=0.002). More patients in the fistula group achieved kt/v > 1.3 compared to the catheter group (81% vs 57%). Patients in the catheter group had a hospitalization index of 0.36 vs 0.18 in the AVF group.

CONCLUSION

Patients who dialyze via an AVF have clear benefits. Higher kt/v, haemoglobin levels and hospitalization rates compared with those who dialyse via a catheter. The projected cost savings to the national health care system as well as improved medical outcomes for patients indicate that renewed efforts involving both healthcare provider and consumer are needed to push AVF rates in the country.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 142

Abstract ID: MSN2023-PD29

CONTINUOUS KIDNEY REPLACEMENT THERAPY IN CRITICALLY ILL INTENSIVE CARE UNIT PATIENTS WITH ACUTE KIDNEY INJURY IN A DISTRICT HOSPITAL WITHOUT NEPHROLOGIST.

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INTRODUCTION

Acute kidney injury in critically ill patient is associated with increased mortality. This paper describes the characteristics of intensive care unit (ICU) patients who required continuous kidney replacement therapy (CKRT), property of CKRT, and outcomes as length of ICU stay, mortality and renal recovery.

CASE PRESENTATION

Retrospective descriptive review was conducted on 13 patients diagnosed with sepsis and underwent CKRT in an ICU of a district hospital without a in-house nephrologist between May 2022 to March 2023. Treatment indications were refractory fluid overload, severe metabolic acidosis (pH<7.1), hyperkalaemia (>6.5mEq/l), and symptomatic uraemia. We describe patients' characteristics, disease severity with Sequential Organ Failure Assessment (SOFA) score, timing of nephrology referral, characteristics of CKRT, and outcomes such as length of ICU stay, mortality and renal recovery.

RESULTS

There were 13 critically ill patients diagnosed with sepsis with multiorgan failure admitted into ICU and underwent CKRT in since May 2022. There were five males and eight females, mean age 46 years (SD 13.6). Pre-morbidly, eight had diabetes mellitus (61.5%), six had hypertension (46%), three had heart failure (23%), and one each for stage V chronic kidney disease, coronary artery disease and bronchial asthma (8%). Four patients had no illness (31%). Twelve patients (92%) had severe disease; mean SOFA score 16 (SD 3.2).

Time to nephrology referral and initiation of treatment were between <1 day to 2 days. All received continuous venovenous hemodiafiltration using Prismaflex-Baxter machine. Mean treatment duration is 38 (SD 31.8) hours. Incomplete treatment is due to seven circuit clotting and four deaths. Two patients with anticoagulated circuits completed treatment. Mean length of ICU stay was 10 days. Three patients survived with renal recovery, and mortality rate was 77%.

CONCLUSION

CKRT provides hemodynamic stability for critically ill patients. We aim to increase circuit patency and improve mortality rate by expanding treatment to wider range of patients. This review provides insight for improvement and encourages CKRT initiation in other centers.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 27

Abstract ID: MSN2023-PD30

CONTRIBUTING FACTORS ON PATIENT'S SURVIVAL WHILE ON BRIDGING HEMODIALYSIS

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INTRODUCTION

In Malaysia, the most common type of Renal Replacement Therapy (RRT) is hemodialysis (HD), followed by peritoneal dialysis (PD) and renal transplantation (RT). However, bridging HD plays an important role in providing temporary RRT and the impact of this modality on survival has not been well-studied. Therefore, our objective was to investigate the contributing factors that affect patient's survival while on bridging HD.

CASE PRESENTATION

This is a retrospective cross-sectional study on record review from January 2016 until December 2020, involving end-stage renal disease (ESRD) patients from a multicenter in Kelantan. The data from the patient's record including socio-demographic, co-morbidities, biochemical parameters, clinical presentations, mode of interim HD and clinical outcomes were collected. An event was defined as death. The data were analyzed using SPSS version 26. The ethics approval was obtained from the Medical Research & Ethics Committee (MREC), Ministry of Health (MOH).

RESULTS

Out of 288 patients, 253 patients enrolled in this study. The age range between 18-80 years. The majority were males (55.7%), having Hypertension (91.7%), Diabetes Mellitus (75.9%),

Ischaemic Heart Disease/Heart Failure (IHD/HF) (29.2%) and stroke (5.5%). The most common outcome of bridging HD is catheter-related infection (CRI). However, statistical analysis showed there was no statistically significant between CRI and event. During a follow-up, 24.1% of patients reported having a history of urgent admission related to ESRD. We found that patients presented as crash landers have a 3.77 shorter time to event (95%CI: 1.31-10.86, P=0.014), patients underlying IHD/HF have a 2.19 shorter time to event (95%CI: 1.13-4.24, P=0.020), and bridging HD with tunnel have a 2.28 shorter time to event (95%CI: 0.66-7.97, P=0.195). Other variables were not significant.

CONCLUSION

The patients presented with a crash lander and underlying IHD/HF might be the contributing factor that affects the patient's survival while on bridging HD.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 103

Abstract ID: MSN2023-PD31



DECLINING RENAL FUNCTION AND WORSENING PROTEINURIA FOLLOWING INTRAVITREAL VASCULAR ENDOTHELIAL GROWTH FACTOR THERAPY FOR DIABETIC RETINOPATHY; A CASE SERIES.

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INTRODUCTION

Intravitreal vascular endothelial growth factor (VEGF) blockade is widely used for Diabetic Retinopathy (DR). The adverse effects of intravitreal injection are thought to be less compared to the traditional effects with the systemic use. Hence, we described cases with worsening of kidney function after administration of intravitreal anti-VEGF leading to ESKD.

CASE PRESENTATION

Case 1: A 44 year-old gentleman with Hypertension and DMT2 had an acute declined in kidney function after receiving 6 doses of intravitreal Ranibizumab. His baseline was Creatinine was 98 umol/L one-year ago and increased to 515 umol/l after completing 6 months therapy. His blood pressure was difficult to control. Otherwise, no other events to explain the deterioration. Kidney biopsy findings were consistent with Diabetic Nephropathy and hypertensive changes with chronic tubulointerstitial damage. He eventually became dialysis dependent.

Case 2: A 61 year-old gentleman with DMT2, Hypertension and CKD noted to have raised Creatinine from 149 to 401 umol/L and 0.5 g/mmol Creatinine of UPCI despite good blood pressure control. Upon exploring, he received first dose of intravitreal Bevacizumab one-week prior.

Histopathological findings were consistent with diabetic nephropathy and acute interstitial nephritis. Due to severe visual impairment, anti-VEGF therapy been continued with close kidney function monitoring. The emergent institution of dialysis was made as he became symptomatic of fluid overload and now dialysis dependent.

RESULTS

Intravitreal anti-VEGF can potentially induce kidney-related adverse effects as systemic administration. However, the association of kidney deterioration with its usage in diabetic patients are unclear. Kidney biopsy is indicated to aid the diagnosis but with the wide spectrum histopathological findings has been observed, direct causality of VEGF-therapy is imprecise. These adverse events are inclined to be underreported, given patients who receive therapy do not undergo regular kidney monitoring hence delayed in recognition of debilitating complications.

CONCLUSION

These cases highlight the importance of close monitoring of kidney function in diabetic patients who are receiving intravitreal anti-VEGF especially those with high-risk profiles. The clinician should be aware of the potential complication and important to advocate multidisciplinary care.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 47

Abstract ID: MSN2023-PD32



FIBRIN SHEATH STRIPPING USING INTERNAL SNARE TECHNIQUE IN MANAGEMENT OF CENTRAL VENOUS CATHETER DYSFUNCTION: A CASE SERIES

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INTRODUCTION

Fibrin sheath is a common cause of central venous catheter dysfunction, which sometimes cannot be ameliorated by catheter exchange or thrombolysis. Many hospitals still have limited access to interventional radiology services. Internal snare fibrin sheath stripping technique is a viable option but is not widely published.

CASE PRESENTATION

Seven patients who had catheter dysfunction with demonstrable fibrin sheath on fluoroscopy, had received internal snare fibrin sheath stripping from August 2022 till December 2022. The internal snare was formed by folding a 0.089cm Terumo nitinol guidewire into an elliptical loop and it was passed through both catheter ports to and fro repeatedly. This procedure was done by nephrology trainee and nephrologist. Success of the procedure was determined by the ability to aspirate blood from the catheter lumens using a 20cc syringe, followed by subsequent successful hemodialysis sessions. After procedure, these subjects were followed-up up to 3 months.

RESULTS

Five out of seven cases (71.4%) were able to achieve immediate success in restoration of flow with internal snare maneuver. Out of the 5 successful cases, the 2-week, 4-week and 8-week primary patency rates were 100.0%, 60.0% and 40.0% respectively. The 3-month catheter survival rate was 40.0%. One subject developed non-serious bleeding after procedure, otherwise no infective complication was noted

throughout follow-up. All subjects tolerated the procedure without sedation.

CONCLUSION

Internal snare fibrin sheath stripping technique is a viable and inexpensive option to treat central venous catheter dysfunction secondary to fibrin sheath.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 119

Abstract ID: MSN2023-PD33



HAEMODIALYSIS FOR METHOTREXATE TOXICITY IN A PATIENT WITH PRIMARY CENTRAL NERVOUS SYSTEM DIFFUSE LARGE B CELL LYMPHOMA: A CASE REPORT

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INTRODUCTION

Methotrexate doses of 500 mg/m² or higher are defined as high-dose methotrexate used in the treatment of acute lymphoblastic leukaemia, primary central nervous system lymphoma, systemic non-Hodgkin lymphoma, and osteosarcoma. High-dose methotrexate poses higher risk of developing toxicity including nephrotoxicity, hepatotoxicity, gastrointestinal mucositis, bone marrow suppression, and neurotoxicity. There is an increased risk of toxicity with plasma methotrexate levels above 5 to 10 µmol/L at 24 hours, more than 1 µmol/L at 48 hours and more than 0.1 µmol/L after 72 hours. Initial treatment for methotrexate toxicity includes folinic acid rescue, hyperhydration, urinary alkalization and glucarpidase. Haemodialysis can also be an alternative treatment in cases where initial therapy was insufficient.

CASE PRESENTATION

Hospital database was assessed for all the required information.

RESULTS

We describe a 60-year-old female with primary central nervous system diffuse large B cell lymphoma who was treated with first cycle of DeAngelis protocol of IV methotrexate 2.5g/m². Forty-eight hours after infusion, her plasma methotrexate level was markedly elevated at 35.3 µmol/L. She developed acute kidney injury KDIGO stage 3 with her serum creatinine increased from a baseline of 60 µmol/L to 283 µmol/L within 24 hours. She did not show toxicity in other organ systems. She was initially treated

with IV folinic acid, hyperhydration, and urinary alkalisation. However, despite these treatment, her plasma methotrexate level remained high at 16.11 µmol/L at 72 hours. As glucarpidase was not available, she was then started on intermittent haemodialysis. She received a total of 4 sessions of haemodialysis over a span of 8 days to bring down her plasma methotrexate level to a safe level of 0.117 µmol/L. Her serum creatinine also improved to 119 µmol/L but did not return to baseline yet after 2 months.

CONCLUSION

As a conclusion, intermittent haemodialysis is another effective option of treatment for methotrexate toxicity.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 157

Abstract ID: MSN2023-PD34



HEMODIALYSIS AND/OR HEMOFILTRATION ARE IMPORTANT INTERVENTION FOR SURVIVAL POST PARAQUAT INGESTION: A SINGLE CENTRE RETROSPECTIVE CASE SERIES.

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INTRODUCTION

Paraquat is a common herbicide that is highly toxic upon ingestion with a fatality rate of 60 to 80%.

CASE PRESENTATION

This is a single center retrospective case series from 1st January 2022 to 31st December 2022. 8 patients with paraquat poisoning in Hospital Sungai Buloh were analyzed. Electronic medical records were used for data collection. Statistical analysis was done using SPSS version 25.

RESULTS

A total of eight patients had paraquat exposure mainly from deliberate self-harm. Out of eight patients, five (62.5%) were males with a mean age of 34.3 ± 16.1 years. Five patients (62.5%) ingested more than 10 millilitres of paraquat which is considered the minimum lethal dose. Vomiting was the main symptom of presentation. All patients were submitted for either urgent hemodialysis and/or charcoal hemofiltration upon diagnosis. 4 patients (50%) underwent charcoal hemofiltration, 2 patients (25%) had both hemodialysis and charcoal hemofiltration while 2 patients (25%) had only hemodialysis. The mean interval between hospital admission and start of hemodialysis/charcoal hemofiltration was 16.0 ± 8.9 hours while the frequency of dialysis was 3.9 ± 3.4 before a negative urine paraquat was attained. Mean creatinine was 62.9 ± 23.7 $\mu\text{mol/l}$ upon admission. 50% had increase of serum creatinine of 144.1 ± 68.8 $\mu\text{mol/l}$. Dexamethasone was given as adjunct therapy in 7 patients (87.5%). Total length of hospitalization was 7.5 ± 5.0 days. In-hospital mortality were observed in 2 patients (25%) attributed to respiratory and

circulatory complications respectively. Our 6 months follow-up showed a survival rate of 75% with no re-hospitalization to date.

CONCLUSION

The 6-month survival rate was good post hemodialysis and/or hemofiltration despite delayed initiation due to late presentation among post paraquat ingestion patients.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 133

Abstract ID: MSN2023-PD35



HEPARIN-INDUCED THROMBOCYTOPENIA IN A PATIENT WITH END-STAGE RENAL DISEASE

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INTRODUCTION

Heparin-induced thrombocytopenia (HIT) is a life-threatening complication of exposure to heparin (unfractionated heparin, low molecular weight [LMW] heparin) that occurs in a small percentage of patients exposed. This comes as a challenge especially to patients on haemodialysis as heparin is a commonly used anticoagulant.

CASE PRESENTATION

Case based discussion on HIT based on an admission in Hospital Sungai Buloh.

RESULTS

A 56-year-old gentleman with chronic kidney disease (CKD) presented with fluid overload and uraemic symptoms. Upon presentation, his Urea level was 48mmol/L and Creatinine level was 1380umol/L, with blood gas showing PH 7.05, Bicarbonate level 7.7 mmol/L. Urgent dialysis was initiated via central venous catheter and intermittent haemodialysis was performed throughout admission. Patient had a baseline platelet count of 202 x 10⁹/L, which gradually reduced to the lowest level of 48 x 10⁹/L, 10 days after initiation of haemodialysis. Patient had no clinical signs or symptoms suggestive of thrombosis, nor any bleeding tendencies. Peripheral blood film showed thrombocytopenia of unknown cause. Autoimmune work-out (C3, C4, ANA) and septic parameters were normal. The 4Ts score was at 6, indicating high probability of HIT. Platelet antibody screening was sent and hemodialysis was done heparin free. During follow up, platelet counts increased back to 237 x 10⁹/L and HPF4 antibodies came back as positive. Patient was subsequently advised for another mode of renal replacement therapy (RRT) which was peritoneal dialysis.

CONCLUSION

HIT proposes a challenge to patients on hemodialysis. Choices of heparin free dialysis/change in circuit anticoagulation using non heparin based regimes or a transition to Peritoneal Dialysis needs to be considered.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 94

Abstract ID: MSN2023-PD36

HOSPITALISATION BURDEN RELATED TO VASCULAR ACCESS COMPLICATIONS AMONG PATIENTS ON MAINTENANCE HAEMODIALYSIS

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INTRODUCTION

Hospital visits related to vascular access (VA) complications among maintenance hemodialysis (HD) patients impose significant morbidity and cost burdens on healthcare systems. This study aimed to examine the burden of admissions specifically associated with VA complications in patients receiving maintenance HD.

CASE PRESENTATION

We performed a retrospective cohort study at a single center, evaluating all end-stage kidney disease (ESKD) patients who experienced VA problems requiring visits to the nephrology ward and intervention suite between January 1, 2023, and March 31, 2023.

RESULTS

A total of 138 hospital visits were recorded, with a mean age of 54.4 ± 13.5 years and a male-to-female ratio of approximately 2:1. The mean dialysis vintage was 4.1 ± 4.4 years. The most common comorbid conditions in our cohort were diabetes mellitus (71.9%), ischemic heart disease (28.1%), and cerebrovascular accident (CVA) (10.9%). Non-tunneled HD catheters (NTDC) were used by 49.6% of patients, followed by arteriovenous fistula (AVF) (27.3%) and tunneled HD catheter (TDC) (23%).

Most of the cases (71.9%) required hospital admission. The main reasons for hospital visits were catheter-related bloodstream infection (23%), non-functioning dialysis catheter - both NTDC and TDC (20.1%), thrombosed AVF/G and dislodged catheter (12.2%). Other causes of admission included interventional radiology-related procedures (12.9%), TDC placement (7.9%), VA-related bleeding (5.1%),

and infected AVF (4.3%). The mean duration of stay in the ward was 6.1 ± 5.2 days.

CONCLUSION

Our study highlights the substantial burden of hospitalization in maintenance HD patients due to VA complications. Identifying risk factors associated with these complications is essential to implement strategies aimed at reducing complication rates and improving patient outcomes.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 170

Abstract ID: MSN2023-PD38

INCIDENCE OF CATHETER-RELATED BLOOD STREAM INFECTION IN HOSPITAL ENCHE' BESAR HAJJAH KHALSOM, KLUANG (HEBHK)

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INTRODUCTION

Catheter-related bloodstream infection (CRBSI) is one of the most common consequences that increase the mortality and morbidity of patients with end-stage kidney disease (ESKD). The purpose of this data collection is to assess the prevalence of CRBSI, as well as the demographic profile of the patients, clinical characteristics, and outcomes among patients admitted to HEBHK.

CASE PRESENTATION

This is a retrospective analysis of patients with suspected CRBSI from January 1, 2022 to December 31, 2022. Clinical symptoms, comorbidities, catheter features, and microbiological culture results were examined in patients who met the blood culture criteria for CRBSI. The outcomes of CRBSI were also evaluated.

RESULTS

In the 1-year period under study, there were 161 patients who underwent catheter insertion for commencement of hemodialysis via femoral or internal jugular access. During that time, the percentage of patients who experienced CRBSI was 4.9%. The majority of the cohort consisted of male (52.5%), Malay ethnicity (72%), and patients on dialysis catheter via internal jugular access (76.7%). Almost half of the cohort who required catheter insertion were ESKD patients who experienced malfunction arterio-venous fistula (AVF) malfunction. Another 30% of the patients were due for initiation of renal replacement therapy; awaiting AVF creation or maturation. The majority of them has diabetes mellitus (60%) and hypertension (71%). The predominant microorganisms that were isolated were

Gram-positive organisms. Unfortunately, 50% of the CRBSI occurred with 1 week post insertion of the catheter. The overall mortality rate was 1.8%.

CONCLUSION

According to the findings, clinical assessment and positive culture are critical in identifying CRBSI. This study provides critical information for the local setting, allowing healthcare providers to apply measures for better CRBSI management.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 165

Abstract ID: MSN2023-PD39



LIPID APHERESIS IN HOMOZYGOUS FAMILIAL HYPERCHOLESTEROLEMIA (HOFH) IN PREGNANCY &NDASH; A MALAYSIAN EXPERIENCE

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INTRODUCTION

Homozygous familial hypercholesterolemia (HoFH) is a rare genetic disease which caused accelerated atherosclerosis and its ensuing cardiovascular complications. Pregnancy in HoFH is rare, and poses management challenges as statins are contraindicated in pregnancy. We report a case of a 24 year old patient with HoFH who presented to us in early pregnancy. Hemodynamic compromise necessitated double filtration plasmapheresis (DFPP) method for the patient, which was successful in reducing her lipid level throughout her remaining pregnancy.

CASE PRESENTATION

Case report.

RESULTS

A 24 year old lady diagnosed with HoFH at 7 years old, presented to us at 7 weeks of pregnancy with vomiting. She defaulted her biweekly plasma exchanges since 12 years old due to personal issues. Her presenting cholesterol level was 15 mmol/L, LDL-C of 13.2 mmol/L with widespread xanthomas clinically. She was initiated on biweekly plasma exchange with aim of exchanging 1800mls per session (40-45mls/kg), however she developed intradialytic hypotension after her second exchange leading to fistula failure and subsequent urgent reconstruction. DFPP was applied for 5 sessions before being eased back to conventional plasmapheresis. Mean reduction rate of cholesterol levels was 46% after each treatment. She delivered at 34 weeks due to fetal indications, and was discharged well with her

baby. Plasmapheresis was continued postpartum as statins were still contraindicated during breastfeeding, unfortunately she defaulted after few sessions and was lost to follow up.

HoFH in pregnancy is associated with maternal cardiovascular complications and potentially immediate fetal complications if left untreated. Plasmapheresis, particularly lipid apheresis is associated with good outcome in terms of patient safety and efficacy in lowering lipid levels.

CONCLUSION

We demonstrated the feasibility of performing lipid apheresis in a pregnant patient with HoFH. While it is the preferred treatment for this condition, it is still underutilized due to unfamiliarity with the procedure and lack of indicated cases.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 82

Abstract ID: MSN2023-PD41

OUTCOME OF CRITICALLY ILL PATIENTS WITH HAEMATOLOGICAL MALIGNANCIES AND ACUTE KIDNEY INJURY REQUIRING CONTINUOUS RENAL REPLACEMENT THERAPY

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INTRODUCTION

Continuous renal replacement therapy (CRRT) is the preferred mode of dialysis to support critically ill, haemodynamically unstable patients with acute kidney injury (AKI). However, there is limited data with regards to the outcome of CRRT in such patients. This study is carried out to determine the outcome of severely ill patients with haematological malignancies and AKI who required CRRT.

CASE PRESENTATION

This was a single centre study. This retrospective study included all patients with haematological malignancies and AKI who underwent CRRT from January 2021 to April 2023. Hospital database and dialysis record book were searched to identify patients who fit the inclusion criteria. Patients demographics, causes of AKI, duration, and the outcome of CRRT were recorded.

RESULTS

Out of 69 patients who underwent CRRT in the intensive care unit, 11 patients were identified in this study. Four patients were excluded because they passed away prior to starting CRRT. A total of 7 patients were included in this study for analysis. The mean age was 42.7 years old (SD=11.3). There were 4 female patients (57.1%) and 3 male patients (42.9%). There were 4 Malays (57.1%), 2 Chinese (28.6%) and 1 Indian (14.3%) patients. Five patients had no other comorbidities. One patient had type 2 diabetes mellitus, dyslipidaemia, and hepatitis B whilst one patient had chronic inflammatory demyelinating

polyneuropathy. The causes of AKI were sepsis (71.4%), transplant-associated thrombotic microangiopathy (14.3%), and tumour lysis syndrome (14.3%). Three out of seven patients (42.9%) had exposure to nephrotoxic agents such as intravenous vancomycin and foscarnet. The mean duration of CRRT was 34.3 hours (SD=29.2). All the patients included in this study succumbed to death despite maximal treatment and support in the intensive care unit.

CONCLUSION

Critically ill patients with haematological malignancies and acute kidney injury requiring CRRT had poor outcome.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 158

Abstract ID: MSN2023-PD42



OUTCOME OF CUFFED HAEMODIALYSIS CATHETER IN MALAYSIA: A SINGLE-CENTRE RETROSPECTIVE COHORT STUDY

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INTRODUCTION

Cuffed haemodialysis catheters are commonly used vascular access in haemodialysis patient. We aim to investigate the outcome of cuffed haemodialysis catheters in our centre.

CASE PRESENTATION

We conducted a retrospective cohort study of haemodialysis patients who underwent cuffed haemodialysis catheter insertion at Hospital Raja Permaisuri Bainun, Ipoh between January 1, 2021, and December 31, 2021. All cases were followed up for one year after the catheter insertion.

RESULTS

A total of 174 cuffed haemodialysis catheters were inserted. The median age of the patients was 59.5 (48.0 – 65.0) years. Primary insertions accounted for almost half of the cases (48.3%), followed by non-cuffed catheter conversions (37.4%) and guidewire exchanges of cuffed catheters (14.4%). The right internal jugular vein (IJV) was most frequently used (43.7%), followed by femoral vein (33.3%) and left IJV (23.0%). During the follow-up, 57 catheters (32.8%) experienced malfunction. The malfunction rates of the right IJV, left IJV and femoral catheters were not significantly different. Among the malfunctioning catheters, 50.9% were treated with urokinase, 38.6% required removal or catheter exchange, and 5% required adjustment under fluoroscopy. Among the cases given urokinase, 55.2% required repeated urokinase treatment or change of catheter. The catheter-related bloodstream infection (CRBSI) rate was 0.63 per 1000 catheter days, with a higher rate in femoral

catheters (0.93 per 1000 catheter days) than IJV catheters (0.48 per 1000 catheter days).

Catheter removal occurred in 82 (47.1%) of cases. Of these, 41.5% is due to malfunction, 19% related to CRBSI and 10.1% were dislodged.

CONCLUSION

Our study revealed a significant rate of catheter dysfunction, with a low success rate of urokinase treatment. These findings underscore the need of implementing comprehensive strategies in mitigating catheter-related complications and enhancing patient outcome.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 136

Abstract ID: MSN2023-PD43



PREVALENCE AND OUTCOME OF CATHETER RELATED BLOOD STREAM INFECTIONS AMONG HEMODIALYSIS PATIENTS IN HCTM

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INTRODUCTION

According to the MDTR data, In 2016, there were 32,008 (85%) patients dialysing via fistula, 5152 (13.6%) via hemodialysis (HD) catheter and 517 (1.4%) via graft in Malaysia. This study aimed to evaluate the latest prevalence, common organism associated with CRBSI and patient outcome following episode of CRBSI in Hospital Canselor Tuanku Muhriz (HCTM).

CASE PRESENTATION

This was a single-center, cross sectional, prospective study involving HD patients with indwelling dialysis catheter who were admitted to HCTM and treated for suspected CRBSI between March 2021 and January 2023. Two sets of blood cultures were taken from the central (catheter hub) and peripheral vein. The baseline demographic, clinical parameters and antibiotic therapies were recorded.

RESULTS

We recruited 200 patients who were treated for suspected CRBSI. The median age was 64 years old. Majority of the patients were on tunneled-IJC (60.5%) followed by non-tunneled IJC (27%) and

non-tunneled femoral catheter (2.5%). The median dialysis vintage was 36 months and median duration of indwelling catheter were 150 days. The proportion of CRBSI fulfilling the IDSA definition in this study cohort was 48%. Gram-positive microorganisms were predominant (85%) in which MSSA and CONS were the most prevalent isolate. The gram-negative microorganisms represent 35% of overall isolates, followed by fungi (7%). As for catheter outcome, 56.5% (n=113) of catheters were removed and 43.5% (n=87) were salvaged. Out of these 87 salvaged catheters, 27 patients had exhausted vascular access and 67 of them were treated for culture negative CRBSI. Ten percent (n=20) of our study population succumbed to death following the episode of CRBSI. CRBSI was the direct cause of death in eight of them

CONCLUSION

The prevalence of CRBSI in this study was 48%. Gram positive followed by gram negative organisms were the most predominant. The combination of vancomycin/ ceftazidime remains as the main choice of empirical antibiotic.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 106

Abstract ID: MSN2023-PD44

PREVALENCE AND OUTCOME OF CATHETER RELATED BLOOD STREAM INFECTIONS AMONG HAEMODIALYSIS PATIENTS IN HCTM

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INTRODUCTION

According to the MDTR data, the proportion of HD patients undergoing HD via fistula has reduced from 90.8% to 85% between 2007 to 2016. In 2016, there were 32,008 (85%) patients dialysing via fistula, 5152 (13.6%) via HD catheter and 517 (1.4%) via graft in Malaysia. One of the major complications is catheter related bloodstream infection (CRBSI). This study aimed to evaluate prevalence of CRBSI among HD patients in HCTM over the years.

CASE PRESENTATION

This was a single-centre, cross sectional, prospective study involving HD patients with indwelling dialysis catheter who were admitted to Hospital Canselor Tuanku Muhriz for suspected CRBSI between March 2021 and January 2023. The blood cultures were taken from the central (catheter hub) and peripheral vein as per IDSA guidelines. The baseline demographic, clinical parameters, antibiotic therapy and list of medications were recorded.

RESULTS

We recruited 200 patients who were treated for suspected CRBSI with a median age of 64 years old and almost similar gender ratio. Majority were on tunneled-dialysis catheters (60.5%). The proportion of patients confirmed CRBSI with IDSA criteria and combination of were 48%. This number is higher compare to a retrospective

study done in our own centre in 2018 who documented 40%. Type of organism cultured showed that Gram-positive microorganisms were predominant and consistent with the retrospective cohort by Shahar et al. The only distinction was that both MSSA and CONS were the most prevalent isolate in our study, while . CONS was the majority isolate in Shahar et al. Another study from the east coast of Malaysia also reported that *S. aureus* (including MRSA) was the main microorganisms isolated among CRBSI cases (45.4%), followed by *P. Aeruginosa* (22.7%) . We found that gram negative microorganisms represent 35% of overall isolates with *Pseudomonas Aeruginosa* and *Klebsiella Pneumonia* predominant. The high emergence of *P. Aeruginosa* in our centre was first reported by Halim et al in 2014. This altered the local antibiogram that incorporated intravenous ceftazidime as part of empirical treatment for CRBSI in our centre.

CONCLUSION

From the analysis, it was concluded that clinical assessment and positive cultures are crucial in diagnosing CRBSI. This study provides essential information for local setting which will enable treating physicians to implement measures for better management of CRBSI.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 89

Abstract ID: MSN2023-PD45

REJECT WATER IN HAEMODIALYSIS UNIT, TO REJECT OR REUSE?

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INTRODUCTION

Hemodialysis posed a huge economic and ecological burden through a high carbon footprint due to high electricity and water usage demand. An individual need more than 490L water/dialysis including the priming and rinsing phase. Reverse-osmosis (RO) system rejected 20 to 75% of feed water which traditionally will be discarded into the sewage system (1Agar et al). Reject water (RW) is of higher quality than potable water which is suitable for animal consumption, agriculture, cleaning and laundry use. 4 government hospitals in Kedah had taken the initiative to reuse this RW from their dialysis unit. We only focused on 3 in this analysis.

CASE PRESENTATION

We reviewed 3 district hospitals in Kedah namely Hospital Sultanah Maliha, Hospital Baling and Hospital Yan for their innovative ways of utilizing RW from haemodialysis unit, their total RW usage (m³) and water bill saving over 6 months. Participating centres installed customized flow systems, piping and water storage tank that redirect RW from their dialysis unit to various areas.

RESULTS

Hospital Sultanah Maliha, with a total of 29 dialysis machines, and 119 dialysis patients, total reused RW is 1904m³ and manage to save Rm3143.42 over 6 months. Hospital Sultanah Maliha reused RW to water plants and football field. Hospital Baling has 16 dialysis machines with a total of 56 patients. They manage to redirect 199m³ of RW to toilet use in the haemodialysis unit, 3 inpatient wards, fish pond and clean the hospital transport and save

Rm328.35 over 6 months. Whereas Hospital Yan with 16 dialysis machines and 65 dialysis patients, manage to reuse 274m³ RW to flush clinic and public toilets. They manage to save RM520.51 over a 6-month duration

CONCLUSION

Clearly, conservation and reuse of RW can save water bills and reduce wastage as well as one of the ways towards better global health.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 74

Abstract ID: MSN2023-PD46



SVC HYPERDENSITY: CATHETER OR CALCIFICATION

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INTRODUCTION

Hemodialysis (HD) catheters are life-lines in acute kidney injury requiring emergency dialysis and in end-stage kidney disease (ESKD) with no native fistula. It is however associated with complications. Among the rare complications is intravascular calcification of the fibrin sheath known as calcified cast or sleeve.

CASE PRESENTATION

Case report

RESULTS

A 27 year-old ESKD patient on long-term HD underwent computed tomography (CT) as part of cadaveric kidney transplantation workout, was reported to have retained fragments of catheter, five years after the catheter was removed. At that point he had been using a native fistula for the past five years with no significant medical or dialysis incidents. Previously he had a history of right sided internal jugular tunneled catheter insertion which was used for about 2.5 years. The catheter was removed with difficulty requiring the use of general anaesthesia by the vascular surgeon, and it was documented a complete catheter removal. He was asymptomatic since the removal of the catheter till the CT finding highlighting the vessel calcification. The other significant complication from his ESKD was his secondary hyperparathyroidism that required parathyroidectomy. Subsequently, with the vascular consult, a chest x-rays and a re-evaluation from our radiologist, the diagnosis of calcified fibrin sheath was made.

CONCLUSION

Prolonged usage of hemodialysis catheters can lead to a few complications, and calcified fibrin sheath is a rather rare one. In this case, without a detailed vascular access history, the CT finding

can be misdiagnosed as retained catheter fragment.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 72

Abstract ID: MSN2023-PD47

THE UTILITY OF INTRADIALYTIC BLOOD CULTURE IN DIAGNOSING CRBSI : A SINGLE CENTRE STUDY

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INTRODUCTION

According to the MDTR data, there were 32,008 (85%) patients dialysing via fistula, 5152 (13.6%) via hemodialysis (HD) catheter and 517 (1.4%) via graft in Malaysia in 2016. Catheter related bloodstream infection (CRBSI) is a known complication in patient with indwelling HD catheter. There was no data on the combination of cultures obtained from central (catheter hub/lumen) and intradialytic (dialysis circuit) to diagnose CRBSI among HD patients in Malaysia. This study aimed to evaluate the prevalence of CRBSI based on combination of central (catheter hub) and intradialytic blood cultures.

CASE PRESENTATION

This was a single-centre, cross sectional, prospective study involving HD patients with indwelling catheter who were admitted to Hospital Canselor Tuanku Muhriz for suspected CRBSI between March 2021 and January 2023. The blood cultures were taken from the central (catheter hub/lumen), peripheral vein and the dialysis circuit at 2nd hour of dialysis. The sensitivity, specificity, and accuracy of intradialytic culture were calculated using peripheral vein cultures as the gold standard. The baseline

demographic and clinical parameters were recorded.

RESULTS

We recruited 200 patients who were treated for suspected CRBSI with a median age of 64 years old and almost similar gender ratio. The median dialysis vintage was 36 (IQR 1,72) months and median duration of indwelling catheter were 150 (IQR 60,330) days. Majority were on tunneled-dialysis catheters (60.5%). The prevalence of CRBSI in this study with IDSA criteria vs combination of central and intradialytic culture were 48% and 40% respectively. The intradialytic blood culture showed sensitivity of 72.38%, specificity of 86.32% and accuracy of 78%.

CONCLUSION

Combination of central (catheter hub/lumen) and peripheral blood culture is still the best method to diagnose CRBSI. However, the combination with central and intradialytic blood culture can be used as an alternative to diagnose CRBSI especially in cases where peripheral vein sampling is difficult to obtain.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 105

Abstract ID: MSN2023-PD48

TRIUMPH OVER TRAGEDY: A RARE PENILE CALCIPHYLAXIS CASE IN CALCIFIC UREMIC ARTERIOLOPATHY

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INTRODUCTION

Penile calciphylaxis is a rare manifestation of calcific uremic arteriopathy(CUA). It is associated with a poor disease course and a high mortality rate of up to 60%, primarily caused by sepsis. There are few cases of penile calciphylaxis reported in the literature.

CASE PRESENTATION

We reported a 70-year-old man with end-stage renal disease, diabetes, hypertension, and ischemic heart disease presented with a painful, non-healing penile ulcer. He had a history of CABG, atrial fibrillation, and was on anticoagulant. On examination, a well-circumscribed ulcer with overlying exudates was discovered on the left side of the penis tip. There was a necrotic ulcer at the right tip of the penis and no palpable inguinal nodes. Labs showed he had tertiary hyperparathyroidism with elevated alkaline phosphatase. Doppler ultrasound found calcifications and abnormal arterial waveform; angiography revealed multiple artery stenoses. The anticoagulant was stopped, and treatment included a non-calcium phosphate binder, penile artery angioplasty and tadalafil for penile calciphylaxis. The patient is improving, and the ulcers are healing.

RESULTS

Uremic milieu causes medial calcification and intimal fibrosis in CUA, leading to painful, necrotizing ulcers and risk of sepsis. Risk factors

include females, obesity, diabetes, ESRD, high parathyroid hormone, and warfarin use. Penile calciphylaxis is a rare, high-mortality form of CUA. Doppler ultrasound, CT, and angiography can aid in diagnosis. There's no consensus on optimal CUA management. Treatment principles include symptom relief, wound healing, and risk factor reduction. Consider non-calcium phosphate binders, dialysis optimization, parathyroidectomy, and penectomy for penile necrosis, although its advantage in morbidity and mortality is unclear.

CONCLUSION

Penile calciphylaxis is a rare, high-fatality CUA manifestation requiring prompt treatment. Without definitive guidelines, a multidisciplinary approach is crucial. Our case shows successful treatment using medical therapy and endovascular revascularization. However, this modality remains controversial, and larger studies are needed for consensus.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 69

Abstract ID: MSN2023-PD49

VARIABLES ASSOCIATED WITH HOSPITALIZATION AND MORTALITY AMONG MALAYSIAN DIALYSIS PATIENTS

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INTRODUCTION

End Stage Kidney Disease (ESKD) patients have high mortality rates. According to the 24th Report of the Malaysian Dialysis and Transplant Registry (2016), the death rate in haemodialysis patients is 13% per year.

The objective of this study is to attempt to identify variables that can be used in a future predictive equation for hospitalization and mortality.

CASE PRESENTATION

This is a retrospective study of all patients dialyzing in DaVita Malaysia clinics from January 2022 till December 2022. Data were obtained from patient medical records. Patients were recruited if they had been dialyzing for more than 90 days in the clinic. We identified clinical outcomes of interest as (1) Cardiovascular or Cerebrovascular Events leading to death or hospitalization (2) Fluid overload leading to death or hospitalization (3) Infection leading to death of hospitalization. We tested the following laboratory variables: (1) Haemoglobin (2) Phosphate (3) Albumin (4) Calcium (5) Potassium (6) Sodium. Data were analysed using the following tools: 1. Sample Variance test, 2. Sample T-Test, and 3. One-way Anova analysis.

RESULTS

We identified 350 patients were hospitalized or died who met the criteria. Of the 350 patients, 131 patients died within three months of admission, 219 Patients recovered after hospitalization. They were compared to a group of 510 well patients.

Table (1) compares the blood test results approximately six months before admission of hospitalized and deceased patients with those of unadmitted patients' admission. As this table shows, there appears to be no consistent pattern that we could identify that would consistently be associated with either hospitalization or hospitalization and death.

Haemoglobin levels were lower in hospitalized patients, but this did not appear to be consistently true for the patients who died. Interestingly, potassium values did not differ in the hospitalized or the patients who died.

CONCLUSION

The variables analysed in this cohort did not appear to be associated with the clinical outcomes of hospitalization and death. While haemoglobin levels were lower in the hospitalization group, it was not consistently seen in the death group. Interestingly, potassium values did not appear to differ between the groups. Weaknesses of this study is the duration of the study and small sample size.

Category: Doctor

Topic: Hemodialysis

Session: E-Poster Display

Submission ID: 186

Abstract ID: MSN2023-PD50



HYPERBARIC OXYGEN THERAPY FOR CALCIPHYLAXIS TREATMENT: A CASE REPORT

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INTRODUCTION

Hyperbaric oxygen therapy is one of recommended treatment for calciphylaxis but rarely utilized due to logistic issue and accessibility.

CASE PRESENTATION

We report a case of calciphylaxis with regards to its diagnosis, management and outcome.

RESULTS

Madam N, a 41 years old lady with chronic kidney disease (CKD) stage 5 , on selfcare continuous ambulatory peritoneal dialysis (CAPD) for 6 month. She had history of recurrent admissions for fluid overload due to non-compliance to her dialysis prescription. She presented with multiple progressive and painful skin ulcers over both lower limbs for the past 4 months. Her BMI was more than 30kg/m². Skin biopsy was declined by her.

Her intact parathyroid hormone level was 25.3 pmol/L.

Despite the mildly raised iPTH level, the diagnosis of calciphylaxis was pursued because the number of lesions were increasing and there was limited alternative diagnosis. Furthermore, she had other risk factors such as being a female, high BMI, and inadequate dialysis. She was not treated with cinacalcet and sodium thiosulfate due to lack of access to these medications. She was transferred to another hospital for hyperbaric oxygen therapy which showed improvement on the ulcers after multiple sessions with no new lesions appearing afterwards. Unfortunately, she succumbed to death due to acute coronary syndrome 2 weeks later.

CONCLUSION

Calciphylaxis typically manifests as painful necrotic skin ulcers among CKD 5 patients with

secondary or tertiary hyperparathyroidism. High index of clinical suspicion is paramount to pick up calciphylaxis early by performing skin biopsy for histopathological examination and initiate treatment accordingly. Hyperbaric oxygen therapy is one of the recommended treatment.

Category: Doctor

Topic: Mineral Bone Disease

Session: E-Poster Display

Submission ID: 159

Abstract ID: MSN2023-PD51

ORAL NUTRITION SUPPLEMENTATION TO TREAT PROTEIN ENERGY WASTING IN HEMODIALYSIS PATIENTS WITH: MEASURING RESPONSE USING GLOBAL UNTARGETED AND TARGETED METABOLOMICS

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INTRODUCTION

Protein energy wasting (PEW) is an abnormal metabolic condition associated with malnutrition and muscle wasting in hemodialysis (HD) patients. Chronic suboptimal dietary protein intake (DPI) and dietary energy intake (DEI) in these patients stimulate gluconeogenesis, which mobilises adipose tissue as well as muscle fatty acids and amino acids. Oral nutrition supplementation (ONS) is recommended for PEW patients to optimise DPI and DEI.

CASE PRESENTATION

We applied global untargeted and targeted metabolomics to study the change in metabolism occurring in HD patients with PEW either treated with ONS (n=29) or only receiving standard dietary counselling (n=27) over six months. Their plasma samples were subjected to nuclear magnetic resonance (NMR) spectroscopy at 600

MHz. Statistical modelling tool, namely, a non-supervised principal component analysis (PCA) and a supervised orthogonal projection latent square-discriminant analysis (OPLS-DA), were used to provide insights on separation of high-dimensional spectral measurement from NMR, whilst region of NMR that correspond to these differences were subsequently quantified using Chenomx.

RESULTS

PCA and OPLS-DA did not discriminate plasma metabolites between the two groups at baseline but detected 5 significant metabolites at 3-month and 6-month as indicators of differences between PEW treatment. N-methylglutamine (p=0.046), 3-aminoisobutyrate (p= 0.011) and 3-hydroxybutyrate (p= 0.015) significantly reduced whilst myo-inositol (p= 0.046) and 2-oxoglutarate (p= 0.031) significantly increased in the ONS treated patient group compared to the patient control group. Pathway analysis showed that these metabolites were associated with tricarboxylic cycle, butanoate metabolism, inositol phosphate metabolism, synthesis and degradation of ketone bodies, and alanine, aspartate and glutamate metabolism.

CONCLUSION

Our results demonstrated that NMR metabolomics is a useful platform for identifying the metabolic pathways related to the effectiveness of ONS in treating PEW patients.

Category: Doctor

Topic: Nutrition

Session: E-Poster Display

Submission ID: 162

Abstract ID: MSN2023-PD52



A CASE SERIES OF APIXABAN USE IN PATIENTS WITH STAGE 5 CHRONIC KIDNEY DISEASE

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INTRODUCTION

Apixaban is a direct factor Xa inhibitor, used as an anticoagulant in various medical conditions to prevent thromboembolism. It is one of the direct oral anticoagulants (DOACs) with emerging prescription recent years, replacing the conventional vitamin K antagonist owing to its non-inferior efficacy with lower bleeding risk. Nonetheless, the use of DOACs in special populations including advanced chronic kidney disease (CKD) is less established due to the lack of clinical evidence. Apixaban is the only DOACs studied in CKD population with estimated glomerular filtration rate (eGFR) as low as 15 ml/min/1.73m². Its use in eGFR below 15 ml/min/1.73m², though approved by Food and Drug Administration (FDA), is not recommended yet in Malaysia.

CASE PRESENTATION

We conducted a descriptive study of 8 patients with stage 5 CKD, who were prescribed with apixaban. We aimed to review the baseline characteristics of those patients and their outcomes after apixaban in terms of thrombotic and bleeding events.

RESULTS

Eight cases of stage 5 CKD were prescribed with apixaban for stroke and thromboembolism prevention in atrial fibrillation. Among the eight patients, 62.5% were male, with a mean age of 70±9 years. Six of them were end stage renal failure patients on long-term dialysis. One patient was prescribed with apixaban after a bleeding event while taking warfarin. All of them had no bleeding event over a treatment duration of 18±13

months. One patient had four episodes of acute coronary syndrome over a two-year-duration and succumbed to death due to end stage heart disease, while the rest had no thrombotic event.

CONCLUSION

The prescription of apixaban in advanced CKD is not recommended yet in Malaysia. The use of apixaban in our cohort of patients shown good efficacy and safe. Long-term efficacy and safety data of apixaban in advanced CKD in local populations requires further evaluation.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 23

Abstract ID: MSN2023-PD53



A RARE CAUSE OF HYPOKALEMIC PERIOD PARALYSIS IN PREGNANCY: CASE OF RTA WITH SEO

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INTRODUCTION

Distal renal tubular acidosis (dRTA) is characterized by impairment of hydrogen ion secretion in the distal nephrons. RTA and Southeast Asian Ovalocytosis (SEO) can co-exist in the same patient as both originate from same mutations of the anion exchanger 1 gene at band 3 which is expressed in both the red blood cells and distal renal tubules. Although SEO is common in Malaysia, the prevalence of RTA with SEO is rare and there are none previously reported in pregnancy.

RESULTS

A 31-year-old Bidayuh, with no known comorbid presented in her 2nd pregnancy at 28 weeks with complaints of proximal limb muscle weakness which was progressively worsening for 1 week. Neurological examination revealed bilateral proximal muscle weakness with power of 3/5, preserved deep tendon reflexes, bilateral down going plantar reflex and normal sensation. Immediate electrocardiogram revealed features of severe hypokalemia changes. Laboratory investigations showed severe hypokalaemia (potassium 1.5 mmol/l), compensated metabolic acidosis with normal anion gap, markedly elevated creatine kinase (9095 U/L) and raised urine pH (7.5). Her ultrasound did not show nephrocalcinosis. These findings are suggestive of dRTA. Work up for secondary causes of RTA which were negative. Coincidentally, her full blood picture was suggestive for SEO. She was treated with potassium supplement, alkali therapy and hydration. Clinically she improved and delivered a healthy baby at term.

CONCLUSION

RTA causes severe hypokalemia as was manifested in our patient which lead to

rhabdomyolysis and could lead to cardiac arrest. Maternal chronic RTA can affect fetal growth and cause fetal distress. This did not happen in our patient. We presume that our patient recently developed RTA which worsened by the physiological changes of pregnancy with undiagnosed SEO. It is important to identify RTA early and offer adequate treatment with regular follow ups to prevent maternal and fetal morbidity or mortality.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 164

Abstract ID: MSN2023-PD54

ALL CLOGGED UP IN THE WRONG PLACE – A CASE REPORT

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INTRODUCTION

Renal artery occlusion is an uncommon and frequently overlooked cause of renal failure. Atherosclerosis and thromboembolism are common causes of renal artery occlusion.

CASE PRESENTATION

Case report

RESULTS

A 36 year-old female presented in March 2023 with colicky abdominal pain and hypertensive emergency (BP 200/130) requiring IVI GTN. She was diagnosed with diabetes mellitus, hypertension, dyslipidemia, HFrEF with apical thrombus when she was admitted with mild CVA in February 2022. She defaulted her medications and follow-up for 1 year but attended the INR clinic. Her INR was subtherapeutic on admission.

Her creatinine at presentation was 162. Echocardiogram showed EF of 35-45% and no LV thrombus. She became oliguric during admission despite diuretics and her creatinine increased progressively to 662. There was proteinuria and microscopic hematuria. Ultrasound of the kidneys revealed no obstruction.

She was subsequently transferred to our hospital on day 10 for further investigation of her renal failure. Stab peritoneal dialysis was done in preparation of a renal biopsy. On day 2 of PD, the PD effluent became heavily blood stained and her Hb dropped needing transfusion. CT angiography showed no evidence of active bleeding but an

incidental finding bilateral main renal arteries thrombosis with bilateral renal infarcts.

She was referred to Vascular and Cardiology team. Renal angiogram done showed bilaterally occluded renal arteries with stenosed arterial branches. Thrombo-aspiration was attempted on both renal arteries but failed to remove the thrombus and only some lipid rich debris was aspirated. Antiphospholipid screening was negative. The renal function did not recover and patient required long term hemodialysis.

CONCLUSION

This case highlights the importance of considering thromboembolism to the renal arteries as a potential cause of acute kidney injury, especially in patients with atrial fibrillation or LV thrombus. Early suspicion, detection and intervention is important to prevent irreversible loss of renal function.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 55

Abstract ID: MSN2023-PD56



AN INTRIGUING CASE OF ACUTE KIDNEY INJURY IN HIV PATIENT: INSIGHTS AND CHALLENGES IN DIAGNOSIS AND MANAGEMENT

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INTRODUCTION

Acute kidney injury (AKI) in HIV patients is a critical condition that requires prompt diagnosis and management. In patients with HIV, AKI can arise from various factors, including direct viral effects on the kidney, drug-induced nephrotoxicity, and opportunistic infections.

CASE PRESENTATION

We present a compelling case of a 50-year-old gentleman with HIV and hepatitis B who developed acute kidney injury after initiating tenofovir disoproxil fumarate, emtricitabine, and efavirenz. He exhibited upper respiratory tract symptoms, which were later confirmed as COVID-19 pneumonia. Blood investigations revealed a dramatic increase in serum creatinine from 133 to 1732 $\mu\text{mol/L}$ over two months, along with electrolyte imbalances and nephrotic range proteinuria. A kidney ultrasound showed normal bilateral kidney size, while renal biopsy demonstrated a focal sclerosing pattern with acute tubulointerstitial nephritis, indicative of HIV-associated nephropathy (HIVAN). Despite steroid and antiretroviral therapy (ART), the patient progressed to end-stage kidney disease (ESKD) and now requires regular hemodialysis.

RESULTS

AKI in HIV patients is a long-standing concern, with various factors contributing to its development, including direct viral effects on the kidney, drug-induced nephrotoxicity, and

opportunistic infections. HIVAN, a specific and severe kidney disease, can lead to rapid progression to ESKD if untreated. While ART has improved life expectancy and quality of life for HIV patients, certain medications like tenofovir disoproxil fumarate can be nephrotoxic, and comorbidities like diabetes and hypertension may increase AKI risk. During the COVID-19 pandemic has added complexity to AKI management in HIV patients, as they may be at higher risk for severe COVID-19 and related complications, making diagnosis and management more challenging.

CONCLUSION

The management of AKI in HIV patients is a complex and multifactorial challenge, particularly in the context of the COVID-19 pandemic. Timely diagnosis, appropriate intervention, and ongoing monitoring of kidney function are essential to ensure the best possible outcomes for these patients.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 52

Abstract ID: MSN2023-PD57

AUDIT ON THE MALAYSIAN DIALYSIS AND TRANSPLANT REGISTRY (MDTR) DATA ACCURACY

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INTRODUCTION

Diabetes mellitus (DM) is the main etiology of End Stage Kidney Disease (ESKD) in Malaysia. However, there may be concerns of over-reporting of DM in the Malaysian Dialysis and Transplant Registry (MDTR). The objective of this audit is to assess the accuracy of data collected in the MDTR.

CASE PRESENTATION

Adult patients who newly started on haemodialysis (HD) or peritoneal dialysis (PD) in year 2021 were included in the audit. A total of 177 centres were invited. Doctors reviewed the patients' medical records retrospectively and coded as 'Yes' if there was documentation of DM, or 'No' if absent. Their results were then compared with the original data of primary renal disease (PRD) that were submitted by the clinical staff to MDTR. Subgroup analysis were carried out to analyse the data accuracy according to sectors, HD vs PD, geographical regions and types of institution.

RESULTS

There were 151 (118 HD, 33 PD) centres which participated in the audit, in which 139 were from Ministry of Health, 8 from Ministry of Education and 4 private Haemodialysis centres. A total of 1977 patients were included of which 63.4% on

PD. The audit showed that 80.2% of the doctor's record matched the MDTR data. There were 45.7% of patients with documentation of DM in the doctor's record and MDTR confirmed the PRD was indeed DM. In the group of unmatched result, there were 16.5% patients in which doctors documented the presence of DM, but MDTR did not indicate DM as the PRD. A small number of patients (2.7%) had MDTR record as "Yes" although the doctor's record was "No". Subgroup analysis showed that private centres or free standing clinics had lower rate of matching data ($p < 0.05$).

CONCLUSION

Our results were comparable with other published validation studies. Strategies to improve data quality include providing guidance for diagnosis of diabetic nephropathy, educating paramedic staff in submitting data and verification of data by the doctors.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 182

Abstract ID: MSN2023-PD58

CALCEMIC UREMIC ARTERIOLOPATHY AMONG DIALYSIS PATIENT: CLINICAL CHARACTERISTICS, TREATMENT AND OUTCOME.

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INTRODUCTION

Calcific uremic arteriopathy (CUA), commonly referred as calciphylaxis, is a rare but profoundly debilitating condition primarily observed in patients with end stage kidney disease (ESKD). Risk factors identified include female, obesity, diabetes mellitus and the use of vitamin K antagonists. This analysis aimed to illustrate the clinical characteristics, risk factors, and outcomes of CUA in a single centre.

CASE PRESENTATION

A retrospective observational study conducted among ESKD patients on dialysis in Hospital Selayang between 1st January 2021 until 31st December 2022. CUA diagnosis were made based on either clinical judgement or biopsy supported by abnormal mineral-bone profile. Data of patients with CUA were collected from medical records of Hospital Selayang.

RESULTS

A total of six cases of CUA identified during the study period. The cohort predominantly affected females (50%), Malay individuals (83.3%), with a mean age of 50.50±15.12 years. The mean body mass index (BMI) was 27.45±8.62 kg/m², with 33.3% classified as overweight and 50% as obese, according to World Health Organization guidelines for the Asian. Majority were on peritoneal dialysis (PD), 66.7% with mean dialysis vintage 4.17±3.13 years. None of the patients were on warfarin and 83.3% were on calcium-based phosphate binders. Ulcerative lesions were 83.3% peripherally (upper limb, lower limb and penile lesion) and 16.7% were centrally distributed (over the truncal and gluteal region). Laboratory investigations demonstrated

mean calcium and phosphate levels of 2.35±0.15 mmol/L and 1.93±0.82 mmol/L, respectively, and the mean calcium-phosphate product (CaXPO₄) and parathyroid hormone level was 4.48±1.79, and 35.30±13.23 pmol/L respectively. Treatment modalities varied with 50% using non-calcium-based phosphate binders, 50% on cinacalcet, 66.7% treated with sodium thiosulphate and only 16.7% had parathyroidectomy done. Within 3 months of diagnosis of CUA, 4 patients died mainly from septicaemia (75%).

CONCLUSION

This retrospective study provides valuable insights into the clinical features and outcomes of CUA. It is imperative for CUA management begins as early in prevention by identifying the risk factors and managing them to prevent fatal morbidity.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 114

Abstract ID: MSN2023-PD59

CEFTAZIDIME-INDUCED NON-CONVULSIVE SEIZURE IN RENAL FAILURE PATIENT

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INTRODUCTION

Ceftazidime is a commonly prescribed cephalosporins with a favourable safety profile. Here, we report a case of ceftazidime induced non-convulsive seizure in a dialysis patient treated for catheter related bloodstream infection (CRBSI).

CASE PRESENTATION

A 69 year old lady, with chronic kidney disease on regular haemodialysis via tunnelled catheter presented with fever and chills during dialysis. She was treated empirically for CRBSI with intravenous (IV) vancomycin 1.5g and ceftazidime 2g on admission. On day 2, her blood culture grew *Pseudomonas aeruginosa* which was sensitive to ceftazidime hence catheter was removed and ceftazidime was continued at a dosage of 1g daily. Seven days after starting ceftazidime, the patient developed sudden confusion and disorientation despite the blood showing improvement in septic parameters. Occasionally she was noted to be aphasic with frequent blank stares. CT Brain done showed no ischemic or haemorrhagic changes while cerebrospinal fluid (CSF) examinations revealed no significant abnormalities.

RESULTS

Electrocardiogram (EEG) showed generalised spike wave complexes occurring every 0.5 to 1 seconds which aborted with bolus IV diazepam. It

was followed by generalised fast activity intermixed with 5-6 cycle/second theta activity. These findings consistent with non-convulsive seizure with generalised cerebral disturbances and patient was started on IV sodium valproate. Ceftazidime was switched to piperacillin / tazobactam 4.5 g twice a day, and she underwent 3 sessions of daily haemodialysis. Patient showed clinical improvement and was fully alert back to her normal self 72 hours after removal of ceftazidime and dialysis.

CONCLUSION

Early recognition of this condition could avoid unnecessary investigations and potential serious brain injury. EEG assessment is recommended in suspected case as this drug could precipitate non convulsive seizure even in patients without known epilepsy. The prognosis is good if detected early, as withdrawal of ceftazidime and haemodialysis is effective in reversing the associated neurotoxicity.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 183

Abstract ID: MSN2023-PD60



COMPACT HIGH-PERFORMANCE EQUIPMENT SONIMAGE MX-1 AND CAMERA LINK REDUCE THE ENTIRE PROCESS FROM PUNCTURE TO TREATMENT WITH A HIGH DEGREE OF CERTAINTY

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INTRODUCTION

What we need from ultrasound echo equipment is the highest overall performance. The recording of appropriate high quality images in conjunction with the angle of the probe via Camera Link allows for the recording and communication of changing patient information, eliminating the subjectivity of each examiner. The use of Camera LINK allows for easy reproduction.

CASE PRESENTATION

We kept a record image of the treatment position in each case, together with an overall view. We checked the effect on treatment time and treatment by referring to the recorded data immediately before the next procedure. Shunt cases Group A: 11 cases (difficult puncture A-1 group: 6 cases, first time of AVF puncture A-2 group: 5 cases), PTA sheath implantation Group B: 5 cases, and brachial transmissible anesthesia Group C: 12 cases were performed.

RESULTS

In group A-1, the procedure time was reduced by two-thirds; in group A-2, initial success was achieved in all 5 cases by confirming the tip of the needle from two directions. In patients with AVF in group B, Camera LINK recording was useful for sheath placement avoiding the venous valve. It was also useful for sheath placement in deeply implanted AVGs. In group C, reference to the records helped to avoid arteriovenous infusion of anaesthetic. In difficult shunts, the accumulation of records of puncture angles and positions by different examiners facilitates subsequent echocardiographic punctures. In

echocardiographic PTA of multiple stenotic sites, recording the sheath placement position by camera link was a great advantage for the next PTA. In transmissible anesthesia, the accumulation of records enabled confident puncture.

CONCLUSION

Above 18 MHz, the rapid probe movement is enough to make examiners and assistants dizzy. Currently, "Triad Tissue Harmonic Imaging" at 11 MHz to 3 MHz is a suitable imaging engine in the dialysis field.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 37

Abstract ID: MSN2023-PD61



EVALUATE SGLT2 INHIBITORS RENOPROTECTIVE EFFECT IN DIABETIC PROTEINURIC RENAL DISEASE PATIENTS IN LOCAL POPULATION – SINGLE CENTRE RETROSPECTIVE STUDY.

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INTRODUCTION

Diabetic kidney disease (DKD) is a serious microvascular complication of diabetes mellitus and the leading cause of end-stage renal disease in Malaysia. Sodium-glucose cotransporter 2 inhibitors (SGLT-2i) have a renoprotective effect and reduce the progression of chronic kidney disease (CKD). Our aim was to study renal outcome in our population with diabetic proteinuric renal disease who were started on SGLT2i.

CASE PRESENTATION

Single centre retrospective study on diabetic proteinuric renal disease patients who were started with empagliflozin in Nephrology clinic, Penang Hospital. Data (Serum creatinine, Serum albumin and Urine protein creatinine ratio (UPCR)) before, at third and sixth month after initiation of SGLT2i were collected retrospectively. Patients' demographic, laboratory and follow-up data were obtained from medical charts.

RESULTS

A total thirty-eight patients on SGLT2i included in the study. Mean age of 57 ± 15.7 years and 71.1% were male. All the patients were on maximum tolerated dose of angiotensin-converting enzyme inhibitor (ACEi) or angiotensin receptor blockers (ARB). There was a significant reduction in the proteinuria levels (UPCR 0.32 ± 0.357 versus 0.24 ± 0.272 g/mmol; $P < 0.001$) and an increase trend in serum albumin levels (34.7 ± 3.93 versus 36.4 ± 4.23 g/L; $P < 0.001$) in the sixth month follow up in patients who were started on SGLT2i. There was a decrease in estimated glomerular filtration rate (eGFR) in the third month which improved in sixth month, although it was not statistically

significant (eGFR pre-treatment 54.0 ± 22.11 , 3rd month 48.4 ± 22.33 , 6th month 52.6 ± 23.49 mL/min per 1.73m^2 ; $P = 0.852$).

CONCLUSION

There is a reduction in the degree of proteinuria noted at sixth month after initiation of SGLT2i in our centre.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 43

Abstract ID: MSN2023-PD62

EVALUATION OF URINE OUTPUT AND CREATININE AS PRE-ORGAN FAILURE PARAMETER AFTER HEPATECTOMY: A MULTIDISCIPLINARY PILOT STUDY FOR SETTING THE PERIOPERATIVE PROTOCOL

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INTRODUCTION

Liver resection has been associated with high morbidity and mortality. Improvements in surgical, and anesthetic techniques, and predicting inflammation to prevent multiple organ failure, can reduce post-surgery complications and mortality. This pilot study aims to provide an overview of the perioperative conditions and the treatments after liver resection, thus a multidisciplinary protocol can be set.

CASE PRESENTATION

A 3-month retrospective study of liver resection surgery at Fatmawati General Hospital.

RESULTS

Of the 11 patients, the mean age was 49.7 years, with 63.6% being female and a mean BMI was 22 kg/m², hypertension and diabetes mellitus were found in 18.2% and 18.2% of patients respectively. HBsAg reactive was detected in 36.3%. Based on pathology, HCC was found in 54.5%, while 18.2% were metastatic adenocarcinoma. Mean urine production at 8-, 16-, 24-, and 48-hours post-operative were 757, 1624, 1880, and 1930 cc. Urine production ≤ 500 cc in the first 8 hours was detected in 44.4% of patients, and elevated creatinine levels >50%

post-operative occurred at 11.1%, 22.2%, 22.2% at 16, 24, and 48 hours post-op. 8-16-24 hours urine and creatinine had not significantly increased the 90 days mortality rate. Blood purification therapy was given to 5 of the 11 patients.

CONCLUSION

Adequate fluid and creatinine are important things that need to be considered in the perioperative management of liver resection.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 57

Abstract ID: MSN2023-PD63



FETUS VERSUS NEPHRONS - A MOTHER'S DILEMMA

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INTRODUCTION

Chronic kidney disease (CKD) in pregnant women is associated with high risk of adverse outcomes for both the fetus and mother.

CASE PRESENTATION

Case report

RESULTS

We describe a case of a 23yo pregnant woman with CKD of unknown primary disease who first presented to the nephrology clinic in February 2013 with a creatinine of 192 (eGFR 32- stage 3b), normotensive, and UPCR of 2.16g/day. No renal biopsy was done due to echogenic and small kidneys bilaterally. Her renal function remained stable (CKD 3b) under nephrology clinic follow-up for 2 years.

She was found to be pregnant in March 2015 at 4 weeks gestation with a creatinine of 365. She insisted to continue her pregnancy despite extensive counseling due to religious reasons. Her renal function worsened throughout her pregnancy and regular hemodialysis was initiated at 27 weeks gestation with a creatinine of 473. There were also fetal complications - polyhydramnios and IUGR. She delivered a 1.98kg baby girl at 36 weeks gestation via SVD. There was no renal recovery and she required long-term hemodialysis post-delivery. In December 2022, the patient received a renal transplant from her sister and was able to return to a dialysis-free life with a healthy 7-year-old daughter without the burden of ongoing hemodialysis.

CONCLUSION

This case highlights the tremendous challenge and complications of pregnancy-related kidney

failure on patients requiring long-term dialysis and thus poor patient survival in the future. It also emphasizes how a kidney transplant is the ultimate gift of life and hope for patients with ESKD. It is important to continue advocating for and supporting organ donation as a life-saving and best potential option of kidney replacement therapy.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 33

Abstract ID: MSN2023-PD64



HYPONATREMIA OVER-CORRECTION - A DRUG TO BALANCE THE EQUATION

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INTRODUCTION

Hyponatremia is a common sighting on the ward, and it can be tedious to manage. Majority of the literature review advises sodium correction of not more than 6-8mmol/L per day. However, there is a tendency for over-correction despite using the Adrogue-Madias formula. This group of patients is at risk of developing osmotic demyelination syndrome. Sodium over-correction occurs because the formula does not take into account the kidney's ability to handle water.

CASE PRESENTATION

We report a case series of using intravenous desmopressin as rescue therapy when sodium is over-corrected.

RESULTS

A total of 6 patients were admitted for hyponatremia who required desmopressin rescue therapy from February 2022 until April 2023. The mean age was 51.8±22 years old with half of them male. 50% of the patients presented with neurological symptoms. As for volume status, 4 out of 6 patients (66.6%) presented with hypovolemia. The mean sodium level on presentation was 112.2±7.7mmol/L. 2 out of 6 patients (33.3%) were initially resuscitated with 3% saline. The mean sodium increment post initial fluid resuscitation was 16.8±4.5mmol/L within first the 24 hours. With the use of desmopressin as rescue therapy, the mean sodium increment over the first 48 hours from baseline was 14.6±3.3mmol/L. We used D5% if the aim was to reduce the sodium level. 3% saline or 0.9% saline was used to increase the sodium level, while no drips were given if the target was to maintain the sodium level. All of our

patients were discharged well without developing neurological symptoms except one who succumbed due to sepsis.

CONCLUSION

The use of intravenous desmopressin for hyponatremia correction allows for a more controlled increment of sodium.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 92

Abstract ID: MSN2023-PD65

IMPACT OF COVID-19 INFECTION ON HEALTH-RELATED QUALITY OF LIFE AMONG HEALTHCARE WORKERS - A SINGLE CENTRE EXPERIENCE

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INTRODUCTION

COVID-19 infection was declared to be a pandemic by the World Health Organization on 11 March 2020. Healthcare workers (HCW) have been on the frontlines in combating this disease since its first discovery, facing higher risk of COVID-19 infection due to the risk of exposure. This study aims to explore the health-related quality of life (HRQoL) of HCW from the Nephrology and Urology Departments at Hospital Kuala Lumpur (HKL) post COVID-19 infection.

CASE PRESENTATION

HCW from Nephrology/Urology Departments at HKL who had COVID-19 infection between 1 January to 31 August 2021 were identified. They were invited to answer an online questionnaire via Google Forms. Participants were informed of questionnaire objectives and their responses were kept anonymous. Demographic data, post COVID-19 symptoms information were collected. The 36-Item Health Survey (SF-36) was used to assess participants' HRQoL. The SF-36 mean scores for eight specific sections of the questionnaire were compared to the Malaysian population norm group.

RESULTS

There were 92 respondents. 20 participants (21.7%) were male; 72 (78.3%) were female. Each item in this questionnaire was scored between 0 to 100. A high score defines a more favourable state of health. The SF-36 is divided into 8 subscales:

- (1) physical function (PF)
- (2) limitations due to physical health problems (role physical, RP)

- (3) bodily pain (BP)
- (4) general health (GH)
- (5) vitality
- (6) social functioning (SF)
- (7) limitations due to emotional health problems (role emotional (RE))
- (8) mental health (MH).

PF, RP and BP focus on physical health status while RE, MH and SF scales focus on mental health. VT and GH are sensitive to both physical and mental health outcomes.

There was significant reduction in the scores of almost all the components of the SF-36 questionnaire, namely PF (mean±SD 73.97±22.54; p 0.00), RP (mean±SD 46.74±44.509; p 0.00), RE (mean±SD 49.64±44.34; p 0.004), vitality (mean±SD 51.85±18.53; p 0.00), MH (mean±SD 64.96±17.26; p 0.00), SF (mean±SD 69.99±22.69; p 0.00), and GH (mean±SD 62.70±16.39; p 0.02). Bodily pain was the only subscale which was not statistically significant.

CONCLUSION

In this study, healthcare workers who had COVID-19 infection have reduced HRQoL in both physical and mental health aspects post infection. As they continue to be on the frontlines fighting the COVID-19 pandemic adequate support needs to be given to ensure their quality of life does not deteriorate further.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 184

Abstract ID: MSN2023-PD66

LETHAL LITTLE CRYSTALS: A CASE OF ATHEROEMBOLIC RENAL DISEASE

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INTRODUCTION

Atheroembolic renal disease (AERD) is a rare and under-diagnosed clinical illness, occurs especially after angiographic procedure.

CASE PRESENTATION

Retrospective case report

RESULTS

We present a case of 63-year-old male with a history of chronic smoking, poorly controlled hypertension, dyslipidemia, and diabetes mellitus who underwent percutaneous coronary intervention (PCI) for acute coronary syndrome. His baseline serum creatinine (Se-Cr) prior to the procedure was 92 $\mu\text{mol/L}$ (estimated glomerular-filtration-rate(eGFR) 72mL/min/1.73m²). Following the procedure, the patient experienced a progressive decline in kidney function (149 $\mu\text{mol/L}$ to 264 $\mu\text{mol/L}$), which prompted further investigation, but he refused. He was referred to our establishment for worsening kidney function and reported a history of taking multiple supplements for general health over the past 6 months.

Physical examination revealed bluish discolouration over the toes persisting after PCI, and laboratory findings showed eosinophilia and significant proteinuria, 870 eosinophils/microL and urine protein creatinine ratio and urine spot test were 86.9mg/mmol and protein 2+, blood 4+ respectively. Autoimmune and viral studies were negative. Kidney ultrasound demonstrated no evidence of obstruction, and kidney biopsy revealed hypertensive vasculopathy with chronic atheromatous embolic disease. The biopsy exhibited near-complete luminal occlusion of interlobular arteries and arterioles with slit-like

cholesterol clefts embedded within cellular intimal fibrosis.

Given the absence of specific therapy for AERD, the patient was managed with supportive treatment, including antiplatelet agents, statins, and optimization of blood pressure and glycemic control. The latest follow-up revealed stable but significantly impaired kidney function, with a Se-Cr ranging from 300 to 311 $\mu\text{mol/L}$ (eGFR 19 mL/min/1.73m²).

CONCLUSION

This case underscores the importance of considering AERD as a potential etiology in patients presenting with renal impairment, particularly when accompanied by skin manifestations, eosinophilia, and a history of invasive vascular procedures. Prompt recognition and appropriate management are crucial to mitigate further renal damage and optimize patient outcome.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 169

Abstract ID: MSN2023-PD67



OCCURRENCE OF PERINEPHRIC HEMATOMA POST-PERCUTANEOUS ULTRASOUND-GUIDED RENAL BIOPSY IN OBESITY

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INTRODUCTION

Percutaneous ultrasound-guided renal biopsy is a safe procedure however there are well-known complications such as perinephric hematoma. Complication rate of perinephric hematoma can be up to 10%. Obesity itself may carry a complication risk as compared to non-obese patient. There are other potential risk factors such as female sex, elevated systolic blood pressure and low haemoglobin level before intervention. However, occurrence of perinephric hematoma may be independent between obese and non-obese regardless of other underlying risk factors.

CASE PRESENTATION

This is a retrospective study of 76 patients that underwent renal biopsy in Nephrology Ward Hospital Serdang from 1st January 2022 to 31st December 2022. Database is collected from electronic Health Information System 12.14.3 and further analysed by SPSS Statistic 27.0. Obese is defined as BMI more than 25kg/m² as per Asia-Pacific classification.

RESULTS

From our renal biopsy cohort, 60.5% are obese patients with mean BMI and weight of 31.1kg/m² and 78.6kg respectively. 39.5% are non-obese with mean BMI and weight of 20.9kg/m² and 54.7kg. We encounter 10.9% of perinephric hematoma biopsy complication in our obese cohort with 40% are female. In non-obese cohort, there were 10% biopsy complication with 33.3% are female. Biopsy complications and gender were similar with P value of 0.904 from Chi

Square Test. Mean systolic blood pressure in obese were 137mmHg while 126mmHg in non-obese. Mean haemoglobin of both obese and non-obese cohort were similar with value of 11.6g/dL and 11.1g/dL respectively.

CONCLUSION

There is no difference in terms of complication rate as well as other risk factors such as gender, mean systolic blood pressure and haemoglobin level before intervention between both cohorts. Percutaneous renal biopsy is a safe procedure with low risk of complications in obese group of patients if it is being done by experience operator and with strict protocol.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 145

Abstract ID: MSN2023-PD68



OVER EIGHTY PERCENT OF PAEDIATRIC HAEMODIALYSIS PATIENTS ON CATHETERS HAD SUCCESSFUL ARTERIOVENOUS FISTULA CREATION.

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INTRODUCTION

80 to 90% of paediatric patients dialyse using catheters before a functional fistula is created. Creating a functional fistula in paediatric patients is a challenge in most centres.

CASE PRESENTATION

Patients under the age of 18 who had fistulas created from 01.01.2018 to 30.06.2022 were included in the retrospective study. Information were extracted from case records and by phone interviews as of 31.03.2023. Statistical analysis was performed using SPSS 26.

RESULTS

54 patients with 57 AVFs were included in the study. The mean age and weight were 13.8 years and 32.7kg respectively. 29 patients started RRT with CAPD, 21 with catheters and 4 with fistula. 24 of the CAPD patients switched to catheters and 7 of the patients on catheter switched to CAPD later on. A total of 44(83%) out of the 54 patients had catheters before AVF creation. 33, 12 and 25, 11 patients were on right, left IJC and right, left permcath respectively. The total duration of IJC and permcath range from 2 weeks to 3.5 years with a mean of 2.5 months and 1 month to 5.3 years and a mean of 17 months respectively. 4 and 1 patient had right and left CVO and 1 patient had bilateral CVO. 36 RCF, 19 BCF and 2 other procedures were done. 49 of the fistulas were functional. The overall primary patency rates at 6, 12, 24, 36 and 48 months are 100, 88, 80, 75 and 62 percent respectively.

CONCLUSION

The vast majority of patients in whom a successful AVF was created in a dedicated centre had dialysis via catheters for a prolonged period

of time. Early referral for AVF creation would have limited catheter use and its complications.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 31

Abstract ID: MSN2023-PD69

OVERCOMING CHALLENGES IN ESTABLISHING INTERVENTIONAL NEPHROLOGY IN MALAYSIA: A COMPREHENSIVE APPROACH

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INTRODUCTION

Interventional Nephrology (IN) plays a vital role in providing optimal care to patients with kidney disease by utilizing minimally invasive techniques for its management. However, in Malaysia, several challenges must be addressed to effectively develop and expand this field. This paper identifies key obstacles to integrating IN in Malaysia, presents a comprehensive approach to overcoming these challenges, and details the methodology used to identify them.

CASE PRESENTATION

To identify challenges in establishing IN in Malaysia, we utilized a multidimensional approach that included a literature review, stakeholder interviews, focus group discussions, and an expert panel review. This approach provided valuable insights from various perspectives, informing the strategies presented to address the identified obstacles and foster the successful development of IN in the country.

RESULTS

In Malaysia, the obstacles to establishing IN services include low awareness, a shortage of trained specialists, insufficient training opportunities, resource constraints, and the need

for coordination among nephrologists. To address these challenges, we recommend strategies such as raising awareness through publications, developing comprehensive training programs, incentivizing workforce distribution, securing funding and resources, and promoting multidisciplinary collaboration among nephrologists, interventional radiologists, and surgeons. To integrate IN services into the healthcare system, a national IN strategy should be devised, encompassing service provision, workforce development, and quality improvement. This could involve setting formal accreditation requirements for IN training, advocating for dedicated funding sources, and establishing a national IN registry for performance monitoring.

CONCLUSION

Implementing these strategies will facilitate the effective development and expansion of IN in Malaysia, leading to improved patient outcomes and equitable access to treatment. A national IN strategy would also enhance the quality of patient care, providing a strong rationale for the growth and expansion of IN services in the country.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 65

Abstract ID: MSN2023-PD70



RECURRENT BILATERAL RENAL ARTERY STENOSIS ASSOCIATED WITH NILOTINIB USE IN CHRONIC MYELOID LEUKAEMIA - A CASE REPORT

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INTRODUCTION

Chronic myeloid leukaemia (CML) is the most common leukaemia in adults worldwide. Nilotinib is a potent treatment option for CML but has been implicated with accelerated atherosclerosis.

CASE PRESENTATION

We report a rare case of recurrent bilateral renal artery stenosis associated with nilotinib use.

RESULTS

A 61 year-old gentleman without prior medical condition presented in 2019 with an incidental finding of high white blood cell count of $57 \times 10^9/L$ and was diagnosed with CML in chronic phase. He was started on nilotinib in 2019 and the CML was controlled.

He was diagnosed to have hypertension in 2020 and was initially started on amlodipine. However, the hypertension was uncontrolled despite three antihypertensives. He soon developed proteinuria of 1.07 g per 24 hour and worsening kidney function. Serum creatinine rose from 86 $\mu\text{mol/L}$ in 2019 to 158 $\mu\text{mol/L}$ by April 2021. Ultrasound doppler renal arteries showed dampening pattern of intrarenal arterial flow of the left kidney indicating indirect evidence of left renal artery stenosis. Magnetic resonance arteriography of the renal arteries showed bilateral renal artery stenosis. Direct renal angiography of the left renal artery showed 90% stenosis at proximal and middle third segment, while right renal artery was 99% stenosed at proximal segment. Both stenotic segments were stented in August 2021. There was no improvement of kidney function, but blood

pressure was better controlled with amlodipine monotherapy. His proteinuria resolved but his kidney function worsened over next six months accompanied by worsening hypertension control. Renal angiography showed restenosis bilaterally and repeated stenting was performed in March 2022. Since then, his serum creatinine stabilised at 220 to 240 $\mu\text{mol/L}$ and blood pressure was controlled. Nilotinib was switched to imatinib.

CONCLUSION

Bilateral renal artery stenosis is a rare complication associated with nilotinib use. Awareness and frequent evaluations are crucial to tackle this complication early.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 44

Abstract ID: MSN2023-PD71



REFRACTORY HYPERKALEMIA IN RTA TYPE 4 MASQUERADING AS A HYPOCORTISOLISM ; IS LYTIC COCKTAIL THE SOLUTION OF CHOICE?

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INTRODUCTION

Hyperkalaemia is defined as a serum potassium level of above 5.5 mmol/L, in which catastrophic cardiac arrhythmia can occur. Acute management of hyperkalaemia includes identification of the cause, stopping hyperkalaemia-inducing medications, and to lower the potassium level by hyperkalaemic "lytic cocktail" which consists of intravenous calcium gluconate 10%, dextrose solution, and insulin.

CASE PRESENTATION

We report a case of refractory hyperkalaemia in type 4 renal tubular acidosis (RTA) despite regular hyperkalaemic lytic cocktail, which only responded well after the prescription of mineralocorticoids.

RESULTS

A 70-year-old man presented with lethargy. He had hypertension, diabetes mellitus, dyslipidaemia, and history of disseminated histoplasmosis leading to adrenal insufficiency and chronic kidney disease with a baseline creatinine and estimated glomerular filtration rate of 210 µmol/L and 29 ml/min/1.73m² with potassium of 4.1 mmol/L. He required hydrocortisone therapy however it was stopped six months prior to current presentation. Initial assessment revealed a dehydrated man with stable renal function, however, noted to have hyperkalaemia, hyponatremia, and metabolic acidosis however with normal blood sugar (5.6 mmol/L) and normotensive (BP : 136/78 mm Hg). He was given adequate intravenous hydration

with sodium bicarbonate, and regular hyperkalaemic lytic cocktail up to four-hourly in view of refractory hyperkalaemia. Intravenous hydrocortisone 100 mg thrice a day was initiated for possible hypocortisolism. Despite having good urine output of two-to-three litres per day with no further derangement of renal function, he had persistent metabolic acidosis and refractory hyperkalaemia above 6.5 mmol/L for three days. A diagnosis of type 4 RTA was made, and he was given oral fludrocortisone of 0.1 mg daily on day 4 of admission, resulting in the resolution of metabolic acidosis and hyperkalaemia within 24 hours. He was discharged well with long-term fludrocortisone 0.1 mg daily after a seven-day-hospitalization.

CONCLUSION

Intravenous lytic cocktail is a temporary, but not a definite solution to hyperkalaemia. Identification of the root cause with appropriate treatment is crucial to prevent catastrophic complications of hyperkalaemia.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 99

Abstract ID: MSN2023-PD72

REVOLUTIONIZING ESRD TREATMENT: A MULTIDISCIPLINARY TEAM'S TRIUMPH IN COMPLEX TENCKHOFF CATHETER PLACEMENT

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INTRODUCTION

In challenging cases, such as those with previous abdominal operations, post-peritonitis, obesity, Tenckhoff catheter insertion can be difficult. We report a case where a Tenckhoff catheter was successfully placed using image-guided fluoroscopy and sonographic assistance. This demonstrated the importance of teamwork in overcoming complex medical challenges.

CASE PRESENTATION

A 68-year-old man with End Stage Renal Disease was referred to our centre for intradialytic hypotension during hemodialysis. This condition persisted despite being on sustained low-efficiency dialysis (SLED) and continuous renal replacement therapy (CRRT). An angiogram revealed mild coronary artery disease and a diagnosis of Ischemia with No Obstructive Coronary Disease (INOCA) was made. He was converted to peritoneal dialysis immediately. However, there was primary catheter failure due to migration and readjustment under mini laparotomy was attempted. This again failed due to multiple adhesions.

He was referred to interventional nephrologist in Hospital Universiti Putra Malaysia (HUPM). With

the help of an interventional radiologist, the Tenckhoff catheter was inserted using limited peritoneography, leading to improved infusion and drainage for the patient.

RESULTS

Despite its many benefits, PD uptake remains low in Malaysia. Often, PD is offered as a last resort to patients with vascular exhaustion and intolerant to hemodialysis. These patients frequently have poor co-morbidities and a high risk for technique failure. Therefore, a multidisciplinary approach is crucial for determining success and catheter survival. This collaborative effort allows for shared knowledge and expertise in managing complex cases. Laparoscopic insertion is commonly used in difficult cases associated with obesity and previous abdominal adhesions. A combined fluoroscopic and sonographic approach is another option that should be offered to patients at risk for general anaesthesia. Moreover, it provides a safer puncture to the peritoneal cavity compared to other technique, as real-time imaging is utilized.

CONCLUSION

Multidisciplinary collaboration enhances success rates of Tenckhoff catheter insertions using image-guided fluoroscopy and sonographic assistance. Involving experts like nephrologists, interventional radiologists, and surgeons allows for shared knowledge, skills, and experiences thus optimizing patient outcomes.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 73

Abstract ID: MSN2023-PD73



RHABDOMYOLYSIS WITH SEVERE ACUTE KIDNEY INJURY IN STATUS ASTHMATICUS : CASE SERIES AND LITERATURE REVIEW

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INTRODUCTION

Status Asthmaticus is an extreme form of asthma exacerbation involving hypoxemia, hypercapnia and type II respiratory failure, leading to ventilatory failure and death. Rhabdomyolysis has been reported as a potentially fatal complication of status asthmaticus¹. Its pathogenesis remained unclear. We reported case series of rhabdomyolysis following severe acute exacerbation of asthma(AEBA) leading to acute kidney injury (AKI) needing renal replacement therapy (RRT).

CASE PRESENTATION

Case 1

31 year-old man, active vaper with underlying bronchial asthma, presented with severe AEBA and type II respiratory failure needing intubation. He required high dose of beta2 agonist infusion and inotropic supports. He was empirically treated with intravenous antibiotics however serial cultures and septic work up revealed negative yield. His admission creatinine was 97 with normal urine output. His urine showed blood of 2+. Following days of ICU stay, his creatinine increased, and he became anuric. He required regular RRT. His CK rose with peak at 10755u/L on day5. Despite prolonged intubation and multiple bouts of hospital acquired infections and acute kidney disease, he obtained renal recovery and discharge with creatinine 103umol/L.

RESULTS

Case 2

20 year-old man, active smoker with underlying bronchial asthma, presented with sudden onset of dyspnea, with cardiorespiratory collapse required 2 cycles CPR pre-hospital. He was intubated for severe type II respiratory failure. He required inotropic support, high dose beta2 agonist

infusion and muscle relaxant. His tracheal secretion revealed enterovirus and rhinovirus positivity. He developed rhabdomyolysis with peak CK of 8034U/L on day 2 with urine blood of 3+ and worsening renal function needing dialysis. His serial culture revealed negative. However, he was intubated for 17 days, and caught with ventilator acquired pneumonia needing intravenous antibiotics. He obtained renal recovery and discharged with creatinine of 114umol/L.

CONCLUSION

Rhabdomyolysis following an acute severe asthma attack is not uncommon and frequently associated with acute kidney injury, which might worsen prognosis. Early detection and prompt treatment should be instituted to prevent serious complications.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 110

Abstract ID: MSN2023-PD74

SURVEY OF URINALYSIS INTERPRETATION KNOWLEDGE AMONG JUNIOR DOCTORS AT A TERTIARY HOSPITAL

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INTRODUCTION

Urinalysis is a simple, cheap, non-invasive screening method used in suspected renal disease patients. It is a useful initial tool to identify many diseases including urinary tract infections, urological conditions, diabetes and glomerular diseases; however, the benefits may be limited due to poor understanding of results or its underuse in appropriate clinical settings. This study aims to assess the interpretation knowledge of urinalysis among junior (non-consultant) doctors at a tertiary university hospital in Ireland.

CASE PRESENTATION

A cross sectional in-person paper survey was performed among junior (non-consultant) doctors at a single tertiary hospital. It included a structured 14 single best answer written questionnaire on urinalysis that participants had to complete forthwith.

RESULTS

A total of 56 doctors participated in this survey. This includes 14 interns, 24 senior housemen, 14 registrars, and 4 specialist registrars. 10 participants were on renal rotation. 3 participants (5.4%; including only one participant from renal rotation) got 10 or more correct answers (>70% marks), which include 27 participants (48.2%; include 5 participants from renal rotation) that had 50% correct answers. More than half (52.8% participants) had more incorrect answers including 4 participants (7.1%) who got a total of only 3 correct answers (21.4%; overall lowest marks in this survey). Most incorrect answers were impact of 1) vitamin C which may cause false negative results including for hematuria

(66%) and 2) strenuous activity (70%), and for interpretation of urine pH (68%).

CONCLUSION

Significant knowledge gaps were identified including in interpretation of specific gravity, urine pH and particularly avoidance of strenuous activity prior to having urinalysis. Based on the results, a urinalysis workshop for junior doctors has been arranged with plan of another survey after the workshop.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 17

Abstract ID: MSN2023-PD75



SYMPTOMS PREVALENCE AMONG CHRONIC KIDNEY DISEASE STAGE IV-V PATIENT OPTED FOR CONSERVATIVE RENAL MANAGEMENT, SINGLE CENTRE EXPERIENCE

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INTRODUCTION

Palliative nephrology focuses on providing supportive care for patients with advanced or end-stage kidney disease by reducing symptoms and holistically addressing patient and caretaker concerns.

CASE PRESENTATION

This is a retrospective study aims to evaluate the prevalence of symptoms in CKD IV-V patients who opted for non-dialysis treatment throughout 8 months of follow-up using integrated palliative care outcome scale(IPOS) renal inventory, patient demographic data, Charlson comorbidity score, and estimated glomerular filtration rate(eGFR) using CKD-epi formula was taken from Hospital Sultanah Bahiyah database from August 2022 till March 2023.

RESULTS

From August 2022 up till March 2023, a total of 34 patients opted for non-dialysis management. The mean age in our patient pool was 72.6 years old. From data analysis, we noticed that the distribution was 67.5% female and 32.5% male patients. The racial distribution data noted Malay ~75%, Chinese 20%, and Siamese ~5%, respectively. The mean eGFR during initial follow-up was 10.38 ml/min/m². Of the patients, 79.4% had Charlson comorbidity score of more than 7 points, which reflects a 0% estimated survival rate in 10 years. We analyzed the frequency of each symptom based on iPOS data. In our population, we noticed that the three most frequent disturbing symptoms were lethargy (76.4%), difficulty in ambulation (70.5%), and sleepiness (70.5%). Other symptoms reported

were nonspecific body aches (61.7%), loss of appetite (55.8%), constipation (41.4%), nausea (14.7%), shortness of breath (26.4%), vomiting (14.7%), and dry mouth (19.4%), respectively. Two other additional reported symptoms were itchiness (29.4%) and edema (8.8%).

CONCLUSION

Based on poor survival rate reflected by high Charlson comorbidity score in our group of patients, early symptoms detection and acknowledgement will give a better impact in managing this group of patients to improve their quality of life.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 113

Abstract ID: MSN2023-PD76



THE SPECIAL ONE: MAN WITH A MYSTERIOUS KIDNEY

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INTRODUCTION

An ectopic kidney is a common condition in males. This abnormal location may lead to various complications such as obstructive uropathy and nephrolithiasis. A pelvic kidney is a rare entity with low clinical incidence. It is usually discovered incidentally with the presentation of abdominal pain or deranged renal function.

CASE PRESENTATION

Case report: We highlighted a case of ectopic kidney with obstructive uropathy in a 23 years old Iban gentleman from the Borneo island who presented with a history of fever and gastrointestinal symptoms for 2 days. Physical examination noted a palpable pelvic mass which is non ballotable and non tender, measuring 25cm x 15cm. His renal profile was deranged (urea: 24.3mmol/L, creatinine: 767umol/L) upon presentation. Unfortunately, there was no baseline renal profile available.

RESULTS

An abdominal ultrasonography revealed ectopic pelvic kidney with severe hydronephrosis and hydroureter. No normal kidneys were seen in the renal beds. A CT urography showed single pelvic kidney with severe hydronephrosis and possible pelvic-ureteric junction obstruction. This patient was referred to Urology Department and had undergone ureteric stent over the site of obstruction. Patient was subsequently given an outpatient appointment under Nephrology clinic to monitor his condition and renal profile.

CONCLUSION

This case aims to raise awareness among clinicians because ectopic kidneys are mostly asymptomatic hence under-diagnosed. However, it may cause kidney impairment silently which can later be catastrophic and ultimately lead to irreversible damage. Early detection of an ectopic

kidney leads to prompt intervention followed by closer follow up to prevent further complications.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 78

Abstract ID: MSN2023-PD77

WHEN KIDNEYS CRY OUT: MEDICAL NEGLIGENCE IN NEPHROLOGY UNEARTHED IN MALAYSIA

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INTRODUCTION

This study presents a series of medical negligence cases in nephrology in Malaysia, aiming to provide a comprehensive understanding of negligence types, causes, and patient outcomes.

CASE PRESENTATION

The case series is extracted from paid public website, Lexis Advance Malaysia Research and Malayan Law Journal which involve diverse patients experiencing medical negligence in nephrology care, such as misdiagnosis, delayed diagnosis, inadequate treatment, medication errors, dialysis errors, failure to monitor and follow-up, and informed consent issues.

RESULTS

Case 1: A 60-year-old woman with end-stage renal failure (ESKD) experienced catheter puncturing her esophagus during left temporary internal jugular vein insertion, leading to her death. The case was settled with an ex-gratia payment of RM 150,000.00.

Case 2: A 27-year-old man with ESKD experienced complications after an internal jugular vein catheter insertion procedure for hemodialysis (HD). He required surgery, and the case was decided in his favor, with the government paying RM 125,799.93.

Case 3: A dialysis patient suffered from ENT symptoms for four years due to improper management of renalin at the dialysis premise. The patient was awarded RM 40,000.00 for enduring daily suffering.

Case 4: A patient was admitted under orthopedic due to an ulnar fracture. The renal function (RP) was not normal, but no further investigation was pursued. The wound became complicated with an MRSA infection and was treated with IV Vancomycin and Gentamycin without informing the patient about the potential risk of kidney failure. The patient's RP worsened, requiring permanent HD. Late investigation revealed that he had only a single functioning kidney. He was awarded RM 858,699.40 for permanent damage.

CONCLUSION

The factors leading to medical negligence, are communication gaps, lack of adherence to clinical guidelines, inadequate training, and system-related issues. The awareness among healthcare professionals about potential pitfalls and encourage the implementation of preventive measures to minimize medical negligence occurrences.

Category: Doctor

Topic: Others

Session: E-Poster Display

Submission ID: 48

Abstract ID: MSN2023-PD78

COMPARISON BETWEEN MYCOPHENOLATE MOFETIL AND CYCLOSPORINE A AS MAINTENANCE THERAPY IN PAEDIATRIC NEPHROTIC SYNDROME

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INTRODUCTION

Mycophenolate mofetil (MMF) has been studied in children with frequently relapsing/ steroid dependent steroid sensitive nephrotic syndrome (FR/SDNS) with mixed outcomes.

CASE PRESENTATION

We performed a pragmatic, non-inferiority case-control study to compare MMF against cyclosporine A (CSA) in maintaining remission. CSA is the existing second line agent; after cyclophosphamide and levamisole. Children up to 18 years old with FR/SDNS with active disease despite treatment with first line agents were recruited. Primary endpoint set was the relapse rate. Non-inferiority margin was determined using the fixed-margin method. This is an interim analysis at 6 months and study is ongoing.

RESULTS

A total of 24 children were recruited. Majority were of Malay ethnicity (83.3%). Mean age was 8.9±3.15 years with a disease vintage of 4.2±2.75

years. Sixteen children received MMF and 6 received CSA. Annualised relapse rate was 0.97 (MMF) versus 1.95 (CSA). The relative risk of relapse in the MMF group was 0.524 (95% CI, 0.256 to 1.074); non-inferiority of MMF from CSA was demonstrated. Both the groups demonstrated improved height velocity; 4.9cm/year (MMF) and 4.7cm/year (CSA). 63% of the children developed gingival hypertrophy by the 8th week. 87.5% children on CSA experienced a 15% rise in urea compared to 37.5% from the MMF group; p=0.034. Similar trends were observed for creatinine and potassium but statistical significance was not achieved. About 50% of children from both groups demonstrated mild leucopenia after 2 weeks of treatment but they improved spontaneously by the 8th week. None experienced increased infection while on treatment. All children who received MMF tolerated it without gastrointestinal side effects.

CONCLUSION

Our study demonstrated favourable outcomes of MMF as an alternative maintenance therapy to CSA. Future studies should include pharmacokinetic analysis to guide clinicians better in drug dosing.

Category: Doctor

Topic: Pediatric Nephrology

Session: E-Poster Display

Submission ID: 54

Abstract ID: MSN2023-PD79

A Nephrologist's Nightmare: Abdominal Cocoon Syndrome in Peritoneal Dialysis

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INTRODUCTION

Encapsulating peritoneal sclerosis (EPS) also known as abdominal cocoon syndrome, is a rare but often fatal complication of peritoneal dialysis (PD). It is characterized by progressive inflammation and fibrosis of the peritoneal membrane resulting in encasement of the bowel. We report 4 cases of EPS diagnosed in our center.

CASE PRESENTATION

Case series

RESULTS

Four patients (three females and one male) with the diagnosis of EPS were identified between 2019 to 2022. The mean age of the patients was 41.8 years (range 22-60). The mean duration of peritoneal dialysis was 85 months (range 24-180). One patient had no prior history of PD peritonitis while the rest had three or more episodes of peritonitis. All patients were diagnosed with EPS based on clinical features and computed tomography (CT) imaging except one. This patient turned out to have EPS with intraoperative findings of cocoon bowel during exploratory laparotomy for suspected bowel injury after revision of the malfunctioned PD catheter. Three patients were diagnosed with EPS after discontinuing PD in view of recurrent PD peritonitis. The other patient developed EPS while on PD. Three patients were treated with tamoxifen and corticosteroids of which one patient developed intestinal obstruction and underwent surgery with adhesiolysis. Three patients died secondary to sepsis, giving overall mortality of 75% in our series.

CONCLUSION

EPS carries a significant risk of malnutrition with high morbidity and mortality. PD catheter dysfunction could be an early sign of EPS in patients with history of multiple occurrences of PD peritonitis. Besides, EPS can occur later on in ESKD patients who are no longer on PD therapy. Therefore, diagnosis of EPS requires a high index of suspicion. Risk factors of EPS include long duration of PD and multiple episodes of peritonitis. Effective medical treatments are still lacking and surgical intervention may be warranted in patients present with small bowel obstruction.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 134

Abstract ID: MSN2023-PD80



ABNORMAL GENITOURINARY FLUID IN CONTINUOUS AMBULATORY PERITONEAL DIALYSIS (CAPD) PATIENT: URINE OR MENSTRUATION?

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INTRODUCTION

Peritoneal dialysis is widely used in acute or chronic renal failure owing to its own safety and cost-effectiveness. Some complications such as peritonitis, flow restriction and exit site leak are common. Fistula communication is a rare complication of peritoneal dialysis and is associated with recurrent peritonitis.

CASE PRESENTATION

Case report: We highlighted a case of 22 years old lady with systemic lupus erythematosus (SLE) with lupus nephritis complicated with ESKD on continuous ambulatory peritoneal dialysis (CAPD). She had recurrent peritonitis and treated with empirical and targeted antibiotics. There was improvement of her symptoms however she developed right sided abdominal pain associated with vaginal discharge in ward. The vaginal discharge fluid was clear, non-foul smelling, tested by bedside glucose dipstick which showed high glucose, raising concern of PD fluid leak.

RESULTS

CT abdomen and pelvis showed right sided intra-abdominal collection extending to mid pelvis with Tenckhoff catheter in situ, right hydrosalpinx and fistulous communication with pelvis collection which appeared that the PD dialysate was travelling from peritoneal through the fistula to fallopian tube and exit through the vagina. CAPD was withheld and kept abdomen dry. Her dialysis mode was converted to hemodialysis.

CONCLUSION

Peritoneal dialysis (PD) associated peritonitis is a common and serious complication of PD. It may cause peritoneal adhesions or fistula formation, resulting in failure of peritoneal dialysis and transition to hemodialysis. Bedside glucose

dipstick can be used to diagnose PD fluid as high glucose content of the fluid is a hallmark of PD fluid.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 124

Abstract ID: MSN2023-PD81



ASSOCIATION BETWEEN LIPID PROFILE AND RENAL RESIDUAL FUNCTION IN INCIDENT CAPD PATIENTS-RETROSPECTIVE STUDY

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INTRODUCTION

Preservation of renal residual function (RRF) is important in improving the survival and quality of life of End Stage Kidney Disease (ESKD) patient. Dyslipidemia has been associated with progression of CKD and reduction of glomerular filtration rate. This study aims to look at the association between lipid profile and preservation of renal residual function among incident CAPD (Continuous Ambulatory Peritoneal Dialysis) patients.

CASE PRESENTATION

This was a retrospective study of seventy patients in single centre (Hospital Tengku Ampuan Rahimah, Klang) who were initiated CAPD from January 2021 until June 2022. Demographic data collected. Baseline lipid profile and Peritoneal Equilibrium Test (PET) was taken at PD initiation and after 6 months of treatment. We investigated the relationship between HDL (>1mmol/L and <1mmol/L) and LDL (>2.5mmol/L and <2.5mmol/L) level at PD initiation with changes (increased and decreased) in renal KT/V at 6 months after PD initiation by using logistic regression analysis.

RESULTS

Mean age was 48.14 years old and majority was male (60%). Comorbid includes forty-two diabetes mellitus (60%), fifty-five hypertension (78%), nine ischemic heart disease (12.9%) and one cardiomyopathy (1.4%) patients. Mean Body Mass Index (BMI) was 23.96.4. Mean weekly total KT/V was 1.950.53, renal KT/V was 0.320.41, peritoneal KT/V was 1.600.44 and urine output was 491510 mls/ day. Fifty-nine patients were on statin (84.3%). Diabetes mellitus, hypertension, ischemic heart disease and statin usage were not

statistically significant. There was no significant relationship seen between HDL and LDL level at PD initiation with changes in renal KT/V at 6 months.

CONCLUSION

There was no association seen between lipid profile with renal residual function in incident CAPD patient in this study.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 137

Abstract ID: MSN2023-PD82

ASSOCIATION OF SOCIOECONOMIC FACTORS WITH PERITONEAL DIALYSIS OUTCOMES IN SABAH: SINGLE CENTRE RETROSPECTIVE COHORT STUDY

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INTRODUCTION

Sabah as one of the states with high poverty rate is facing increasing number of patients with end-stage-kidney disease (ESKD). Most of them are from lower socioeconomic backgrounds, encountering obstacles especially difficult access to healthcare facilities and municipal water supply. We aimed to explore the impacts of socioeconomic status (SES) on the outcome of peritoneal dialysis (PD) in Hospital Queen Elizabeth (HQE).

CASE PRESENTATION

This is a retrospective-cohort, single centre study. All ESKD patients initiating PD at HQE between 1 October 2012 till 12 November 2022 were evaluated. Effects of SES on PD outcomes were measured by the development of first PD peritonitis and PD survival.

RESULTS

522 patients who initiated PD therapy for at least 90 days were included. Only 25.9% were prepared in a timely manner. 37.7% experienced at least one episode of peritonitis during the study period. Mean time of developing first peritonitis was 14.7± 19.1 months. High household income group (>RM4000 per month) had a significant higher risk for first peritonitis, with an adjusted HR of 2.125 (95% CI 1.418-3.185, p< 0.001) compared with the low income group (<RM1000 per month). The mean technique survival time for all patients was 83.1± 3.7 months. The technique survival rates were 91.1%, 80.0%, 74.8%, 66.5%, 57.3%, 45.4% at 1,2,3,5,7, and 10 years respectively. The negative predictors for technique survival were assisted PD (HR 2.273, 95% CI 1.333-3.870, p= 0.003) and staying alone

(HR 3.077, 95% CI 1.150-8.233, p= 0.025). Other factors such as marital status, education level, income, access to clean water and distance from house to PD unit were not significant predictors of technique survival.

CONCLUSION

Low SES does not affect the PD outcome among Sabah patients. Hence, home-based PD therapy is an option for those living in remote areas with difficult access to haemodialysis centres.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 71

Abstract ID: MSN2023-PD83



CATHETER PRESERVING SALVAGE FOR MIGRATED TENCKHOFF CATHETER: A SINGLE CENTRE EXPERIENCE

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INTRODUCTION

Migration of Tenckhoff catheter tip is a common cause of catheter dysfunction and technique failure. Migrated catheter nonresponding to enema is usually removed and reinserted at contralateral abdomen or salvaged surgically. We introduce a catheter preserving salvage aim to preserve old Tenckhoff catheter and tunnel prior to remove and reinsert.

CASE PRESENTATION

This is a retrospective single centre case series of migrated Tenckhoff catheter salvaged by seldinger method. Operation theatre notes from December 2022 to April 2023 were reviewed, eight patients with migrated tenckhoff catheter underwent seldinger salvage at Hospital Tengku Ampuan Afzan were identified. Patients were following up for a minimum of 30 days on the catheter survival and complication.

RESULTS

Patients with simple migration without omentum wrap are likely benefit from seldinger salvage. Patients are selected for seldinger salvage if they fulfil all the followings, initial Tenckhoff insertion under peritoneoscope which ruling out of anatomical factor of outflow failure; x-ray demonstrated migration and suboptimal outflow rather than no outflow which suggestive of omentum wrapping. The previous insertion site is first excised and internal cuff is released. Intra-peritoneal segment is slowly pulled out until side holes are visible whereby guidewire is inserted and advanced. Remaining intra-peritoneal segment is pulled out completely leaving guidewire in place. A dilator with sheath is then advanced through abdominal wall over the wire and Stylet-tenckhoff catheter is reintroduced back

to pelvic cavity. Five of them had a successful salvage and resumed CAPD while three of them failed salvage, successful rate is 62.5% (5/8). 30-day catheter survival for those successfully salvage was 100%. None of them complicated with leakage or peritonitis.

CONCLUSION

Seldinger exchange is a useful salvage for malpositioned Tenckhoff catheter and should be considered prior to removal and reinsertion.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 163

Abstract ID: MSN2023-PD84

CAUSATIVE ORGANISMS AND OUTCOMES OF PERITONEAL DIALYSIS (PD) PERITONITIS IN HOSPITAL TELUK INTAN (HTI): A THREE YEAR RETROSPECTIVE STUDY

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INTRODUCTION

PD peritonitis is a major cause of morbidity and mortality among PD patients. We aim to evaluate the microbiology and clinical outcomes among PD patients in HTI, a district hospital in Perak.

CASE PRESENTATION

This retrospective cohort study included 59 peritoneal dialysis in HTI who developed PD peritonitis from January 2020 to March 2023. We defined PD peritonitis according to the International Society for Peritoneal Dialysis (ISPD) 2022 guideline. Causative organisms and PD related outcomes were extracted from medical records and analysed using SPSS version 26.

RESULTS

The PD peritonitis rate in HTI was high, at 0.59 and 1.19 episodes per patient year in 2021 and 2022 respectively. Forty three percent (43%) of peritonitis were contributed by Gram positive organisms and 16% of cases were caused by Gram negative organisms. Fungal and mycobacterium infections accounted for 2% and 4% respectively. Methicillin-Resistant Coagulase Negative Staphylococci (MRCONS) was the main contributing organism at 20%, followed by Escherichia Coli (7%), Enterococcus (7%) and Methicillin-Sensitive Staphylococcus Aureus (MSSA) (6%). Culture negative peritonitis rate accounted for 34% of total cases throughout the duration of this study.

Seventy six percent (76%) of cases achieved medical cure whereas 22% failed therapy resulting in catheter removal. Fourteen percent (14%) converted to hemodialysis after catheter removal. There was no PD peritonitis related

mortality in our study. There was no statistical difference in PD outcomes between culture positive and negative peritonitis, including medical cure ($p=0.198$), catheter removal ($p=0.138$) and subsequent relapse/recurrence ($p=0.311$). There were no statistical difference in terms of therapy failure among Gram positive and negative bacterial organisms ($p=0.184$). Mycobacterium peritonitis had worst outcome in terms of therapy failure resulting in catheter removal ($p=0.04$).

CONCLUSION

The high rate of PD peritonitis and culture negativity needs further evaluation and improvement to further improve PD outcomes in HTI.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 149

Abstract ID: MSN2023-PD85

CONCURRENT TENCKHOFF CATHETER INSERTION WITH UMBILICAL ABDOMINAL WALL DEFECT REPAIR.

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INTRODUCTION

Tenckhoff catheter (TC) insertion for peritoneal dialysis (PD) treatment can be a contraindication in patients with an umbilical abdominal wall defect (UAWD). We would like to report 16 patients with end-stage kidney disease (ESKD) who underwent laparoscopic TC insertion with concurrent UAWD repair under conscious sedation (intravenous sedation and analgesia as well as local anesthesia for field block).

CASE PRESENTATION

A prospective cohort study on all ESKD underwent concurrent TC insertion with UAWD repair from 15 July 2021 till 29 Dec 2022.

RESULTS

A total of 16 ESKD patients underwent simultaneous TC insertion and UAWD repair during the time frame. The mean age of the patients was 55 (+/- 8.9). Of the 16 patients, 6 were males 37% and 10 were females 63%. 15 UAWD were paraumbilical hernias and 1 was a previous port site hernia. The mean defect size was 1.6 cm (+/-0.5). None of the defects were >3cm and was treated by suture repair. There was no death, intraoperative or immediate complications noted with the procedure. PD training was started on day 14 as per the usual center protocol. No primary catheter dysfunction

rate was documented. One patient had a pleuroperitoneal fistula noted during training. PD was recommenced for the patient after chemical pleurodesis. Median catheter survival at the time of writing is 9.8 months, no hernia recurrence was registered.

CONCLUSION

Concurrent TC insertion with UAWD repair can be performed for ESKD patients who opt for PD therapy with good outcomes. The incidence of hernia recurrence rate can be determined with a longer follow-up of this group.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 21

Abstract ID: MSN2023-PD86

CONTINUOUS QUALITY IMPROVEMENT IN PRE-PD PERITONITIS: MULTIFACETED STRATEGIES.

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INTRODUCTION

Pre-PD peritonitis was introduced in ISPD guidelines 2022 and defined as peritonitis episode occurring after PD catheter insertion and prior to commencement of PD treatment. Our center experienced an increase number of pre-PD peritonitis from January to April 2022. This study focuses on implementing a comprehensive continuous quality improvement (CQI) program aimed at reducing the incidence of pre-PD peritonitis in our unit.

CASE PRESENTATION

We engaged a multidisciplinary team to perform risk assessment of pre-PD peritonitis, including Infectious Disease, Urology and Nursing at second quarter of 2023. The CQI strategies encompass patient's selection including the SOP of pre and post PD catheter care. From May 2022 onwards, we changed the sterilisation solution from Peracetic Acid (Andopa) to hydrogen peroxide (Anioxyde). The dialysate for flushing were used based on the assigned system instead of standardize Ain-Medicare dialysate. We also monitor environmental factor such as humidity and temperature of the operation theatre (OT). OT's high efficiency particulate air filter were changed in July 2022. All Operator including doctors and nursing staff's scrubbing procedure were audited by Urology OT and Infection Control team in August 2022 and September 2022 respectively. Finally, chlorhexidine solution was used instead of povidone iodine for skin sterilisation. All the above measures were fully implemented by the fourth quarter of 2022. The data pre and post implementation were obtained and compared.

RESULTS

Total PD catheter insertion was 146 with incidence of pre-PD peritonitis of 19.8% (n=29). There were 7 cases of pre-PD peritonitis from January to April 2022. The incidence was 14% (n=50), however post CQI implementation, only 4 cases recorded in the same period of 2023 where the incidence was 12% (n=33), p= 0.06.

CONCLUSION

We encourage more audit in pre-PD peritonitis and risk assessment is definitely an important tool to identify and reduce peritonitis incidence

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 192

Abstract ID: MSN2023-PD87



CULTURE NEGATIVE INFECTIVE ENDOCARDITIS IN CHRONIC PERITONEAL DIALYSIS ; WHY ?

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INTRODUCTION

Infective endocarditis (IE) is a well-known debilitating complication among hemodialysis patients, particularly those with indwelling vascular access. On the other hand, there is limited data on the experience and outcome of IE in peritoneal dialysis patients as they are much rarer.

CASE PRESENTATION

We report an exciting observation and outcome of a chronic peritoneal dialysis patient with IE who presented with acute stroke.

RESULTS

A 47-year-old Chinese man with end-stage renal disease secondary to diabetes who was stable on ambulatory peritoneal dialysis for the past eight years presented with sudden onset right-sided body weakness associated with slurring of speech. He was previously well without any history of fever and had no recent hospitalization or peritonitis. Cardiovascular examination revealed mid-diastolic murmur loudest at the apex and the presence of pericardial rub. CT Brain on admission showed multiple acute ischemic lesions involving the left posterior parietal region. Due to suspicion of a cardiac source of emboli, he underwent a transthoracic echocardiogram, which showed several vegetations involving the anterior (AMVL) and posterior mitral valve leaflets (PMVL) measuring 0.79 cm² and 1.59 cm², respectively. There was also minimal loculated pericardial effusion measuring 0.7 cm at its most profound depth. He was empirically treated for native valve IE with intravenous ceftriaxone and ampicillin, but

unfortunately, five successive blood cultures and peritoneal fluids were all negative. Infective parameters CRP were initially elevated (49 mg/dl), subsequently improved with antibiotics, and reduced to 8.5mg/dl. Repeated echocardiogram upon completion of antibiotic shows reduction of AMVL vegetation to 0.4 cm². He was discharged for repeat echocardiographic assessment only to be re-admitted for hypertensive emergency and passed away soon after due to acute coronary syndrome.

CONCLUSION

Chronic dialysis patients, in general, are at risk of culture-negative IE. This could be explained by the history of past antibiotics, temporary bacteremia, risk of acquiring infection by fastidious organisms, and poor microbiologic diagnostic tools. The outcome is unfavorable in many cases as they are also considered high risk to undergo valve replacement. Routine cardiovascular assessment and early echocardiography in those with murmur may be beneficial for detecting silent vegetation as they do not present with typical symptoms.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 174

Abstract ID: MSN2023-PD88



EVALUATION OF FACTORS ASSOCIATED WITH ADVERSE EVENTS WITHIN 6 MONTHS POST INITIATION OF PERITONEAL DIALYSIS PROGRAM IN KELANTAN'S HOSPITALS

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INTRODUCTION

Early Peritoneal Dialysis (PD) complications can potentially be associated with patients' factors but also reflect the efficacy of the center PD training program. There are expected variations in the way the PD program is executed in the center, therefore, we aim to determine the outcome of our center's PD training program.

CASE PRESENTATION

This is a retrospective observational cohort study conducted in Hospital Raja Perempuan Zainab II (HRPZ II) and Hospital Pasir Mas (HPM), Kelantan. All patients who have undergone PD training from 1st January until 31st August 2022 will be followed-up for 6 months and the patient's medical records will be reviewed. The primary outcome of the study is any adverse event related to PD within 6-month program initiation and treatment dropped-out as a secondary outcome.

RESULTS

We have identified 38 patients who received PD training programs in HRPZ II and HPM from 1 January until 31 August 2022, and 19 patients (50%) had significant adverse events related to PD but only 4 patients (10.5%) dropped out from the PD program. There were 23 adverse events reported and 52% (n=12) were PD peritonitis. The eventful group was older age (mean age 52.05 SD±16.86 vs 45.39 SD±13.92;p=0.195) and received more medical Tenckhoff catheter (75% vs 31.6%; p=0.022) although statistically, it's not significant. Both groups have an almost similar

average number of training days before starting the PD program (Uneventful 5.3 SD±1.7 days vs eventful 5.9 SD±2.5 days;p=0.482). Using univariable analysis, we found that patients who were still actively working had an increased risk of developing adverse events within the first 6 months of initiating PD (P=0.036). While there was no mortality during the 6 months observation period, 2 patients deceased less than 1 year after starting PD.

CONCLUSION

Although half of the patients had early adverse events, the dropped-out rate is still acceptable low. Based on the analysis from the study, actively working and having a medical Tenckhoff catheter potentially contributes to early PD complications. PD peritonitis is the most common adverse event thus we suggest that the PD training program should further emphasize techniques to prevent infection.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 117

Abstract ID: MSN2023-PD89



FACTORS INFLUENCING PERMANENT HEMODIALYSIS TRANSFER AFTER PD CATHETER REMOVAL IN PD PERITONITIS: A SINGLE CENTRE EXPERIENCE

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INTRODUCTION

Peritoneal dialysis (PD) related peritonitis is a main contributing factor for PD drop-out. PD catheter removal may deem necessary in certain peritonitis patients. This study is done to assess factors that influence event occurrence and subsequent patient outcomes after removal of catheter.

CASE PRESENTATION

A total of 410 PD patients were recruited and followed up from 1st Jan to 31st December 2022. Patients who had episodes of peritonitis were identified. Peritonitis were defined as at least 2 of the following: (1) presence of clinical features, (2) dialysis effluent WCC $>100/\mu\text{L}$ with $>50\%$ polymorphonuclear leucocytes, (3) positive dialysis culture. Permanent transfer to hemodialysis (HD) is defined as transfer to HD 90 days.

Demographic data, dialysis vintage, laboratory parameters, peritonitis details (culture organisms and outcomes) from the peritonitis cohort were analysed. Inclusion criteria were: (1) age ≥ 18 years old, (2) obtained PD samples for culture (3) had PD catheter removal.

RESULTS

A total of 152 episodes of peritonitis were documented and 60 patients (39.5%) had PD catheter removal. Patients mean age were 57.87 years (SD:13.81), with median dialysis vintage of 2.00 years (IQR:2). 35 patients (58.3%) transfer to permanent HD after PD catheter removal, while the remainder had PD catheter reinsertion.

In patients who required permanent HD transfer post catheter removal, there were no significant differences in terms of dialysis vintage ($p=0.807$), diabetes ($p=0.669$), assisted PD ($p=0.95$), PD solutions ($p=0.499$), number of exchanges ($p=0.261$), KTV ($p=0.697$), hospitalization status ($p=0.999$) and types of organisms.

However, culture-negative peritonitis (30.9%) showed a significant contributing factor for permanent HD transfer post catheter removal ($p=0.015$, OR:7.765, 95% CI:1.482-40.686).

CONCLUSION

Our culture-negative peritonitis was beyond International Society of Peritoneal Dialysis (ISPD) recommendations of $<15\%$. Culture-negative were a significant contributing factor for PD catheter removal and permanent transfer to HD. Limitation of this study were inability to exclude factors such as patient's preference for permanent HD conversion.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 178

Abstract ID: MSN2023-PD90

FIRST OCCURENCE OF EXIT SITE INFECTION AFTER TENCKHOFF CATHETER INSERTION AMONG PERITONEAL DIALYSIS PATIENT IN SUBURBAN HOSPITAL

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INTRODUCTION

Peritoneal dialysis related infection carries high morbidity. Exit site infection is not uncommon after Tenckhoff catheter insertion. This study describes the occurrence of exit site infection after Tenckhoff catheter insertion in Hospital Kulim and identifies the potential risk factors.

CASE PRESENTATION

This retrospective observational cohort study enrolled 37 patients who had inserted Tenckhoff catheter in Hospital Kulim from January 2021 until December 2022. Relevant demographic and clinical data were collected for the analysis.

RESULTS

Among the 37 patients enrolled, 28 (75.7%) patients experienced exit site infection after Tenckhoff catheter insertion on an average of mean 118.2 +/- 112.6 days. The social demographic characteristics showed higher prevalence among adult age group of 15 to 64 years old (51.4%), male gender (56.8%), Malay ethnicity (78.4%), diabetes mellitus (83.8%) and on continuous ambulatory peritoneal dialysis (CAPD) modality (86.4%). 30 patients (81.1%) had their first catheter inserted and most of the patients were converted from hemodialysis to peritoneal dialysis (59.5%). All risk factors were analyzed using Pearson's Chi Square Test and only Exit site infection has positive correlation with topical cream used with statistically significant ($p = 0.05$). However, Assisted CAPD revealed the highest number of patients without exit site infection. Mupirocin cream shown the longest duration in delaying the first occurrence of

exit site infection with the mean of 206.88 +/-149.43 days.

CONCLUSION

Exit site infection happened among 28 (75.7%) patients after Tenckhoff catheter insertion in Hospital Kulim. Early identification of risk factors could potentially prevent catheter loss, improve survival rate, and improve the quality of life among peritoneal dialysis patients. A combination of Assisted CAPD and mupirocin cream might be more effective in preventing occurrence of first exit site infection after Tenckhoff catheter insertion.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 175

Abstract ID: MSN2023-PD92

FUNGAL PERITONITIS SECONDARY TO EXOPHIALA DERMATITIDIS IN PATIENT ON AUTOMATED PERITONEAL DIALYSIS

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INTRODUCTION

Fungal peritonitis in peritoneal dialysis(PD) patients is commonly caused by *Candida* species. *Exophiala dermatitidis* is a dematiaceous fungus responsible for opportunistic infection known as phaeophyphomycosis. It is rarely implicated in PD-associated fungal peritonitis with only handful of literature reports. We report a case of PD-associated peritonitis due to *Exophiala dermatitidis*.

CASE PRESENTATION

A 75-year-old lady with diabetes mellitus, hypertension, ESKD on automated peritoneal dialysis since June 2021 presented with cloudy PD effluent, abdominal pain and loose stool. Her PD effluent on day 0 showed total white cell(TWC) count of 270 cells/L. She was treated as outpatient for PD peritonitis with intraperitoneal ceftazidime and cloxacillin. However, she was admitted on day 6 for second-line antibiotics as there was lack of clinical improvement. Her PD effluent culture grew yeast colonies identified as *Exophiala dermatitidis* on day 7. Oral voriconazole was started and she responded well to antifungal therapy with clearing up of PD fluid and decreasing PD effluent TWC counts from 900 to 30 cells/L. Unfortunately, she required removal of the catheter on day 14 with conversion to hemodialysis due to persistent poor catheter outflow.

RESULTS

Exophiala dermatitidis is found in soil and plant debris. In our case, it is unclear of the source of infection as there is no skin/nail fungal infection on examination. Besides, she has no recent peritonitis or exposure to antibiotics that predispose her to fungal peritonitis. Due to the

rarity of *Exophiala dermatitidis* infection, the optimal antifungal agent is unknown which warrant infectious disease team consultation. Despite clinical improvement with voriconazole, she has catheter outflow dysfunction necessitate transfer to hemodialysis.

CONCLUSION

PD-associated fungal peritonitis carries significant morbidity and mortality. Until more data are available, *Exophiala dermatitidis* PD peritonitis should be treated with prompt catheter removal and antifungal therapy for favorable outcome. Voriconazole is effective against *E. dermatitidis* as illustrated in our case.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 100

Abstract ID: MSN2023-PD93

INCIDENCE, CHARACTERISTICS AND OUTCOMES OF PERITONEAL DIALYSIS-RELATED PERITONITIS IN A TERTIARY HOSPITAL IN MALAYSIA - A 1 YEAR RETROSPECTIVE STUDY

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INTRODUCTION

Home-based peritoneal dialysis (PD) is an effective modality of kidney replacement therapy. However peritoneal dialysis-related peritonitis (PDRP) is a major complication warrants special attention. This study evaluates the incidence, characteristics and outcomes of PDRP in Hospital Raja Permaisuri Bainun (HRPB).

CASE PRESENTATION

A retrospective review of each PDRP episodes with its 1-year outcome at HRPB in 2021. Association between demographic, characteristic and outcome were analyzed.

RESULTS

A total of 101 PDRP episodes occurred in 73 patients predominant Malay (72.3%), female (56.4%), median age of 60, and diabetes (65.3%) as the commonest etiology of end stage-kidney disease. Most patients had a secondary education level (59.4%) and a household income <RM3000 (86.2%). Assisted (71%) CAPD (91.1%) was predominant modality performed with a median PD vintage of 20 months.

The PDRP rate was 0.28 episodes per patient-years, lower rate seen in APD compared to CAPD (0.14 vs 0.31). 65% of PDRP had positive culture including CoNS (11%), staphylococcus spp. (9%), klebsiella spp. (7%), fungal (8%) and mycobacterium spp. (4%). Most required hospitalization (94%) with median length

of stay of 9.6 days and 60% receiving 3rd line of antibiotics (vancomycin and/or imipenem).

Majority (52.5%) of PDRP episodes achieved medical cure while catheter removal were required in 33.7%, relapse/recurrent in 7.9% and death in 5.9%. Among 73 patients with PDRP, 31.5% had recurrent episodes within that year. Less than half (46.6%) remained on PD after 6 months post PDRP, and lesser (38.4%) after 1 year. Significant higher rate of dropout was seen among those with PD vintage >1 year ($p=0.016$) and fungal peritonitis. There were no association between demographic background and outcome of peritonitis in this cohort.

CONCLUSION

PDRP remains a major complication with high rates of technique failure and mortality. Thus, optimizing peritonitis prevention therapy and effective treatment strategies need to be emphasized.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 141

Abstract ID: MSN2023-PD94



INTRAPERITONEAL CEFEPIME MONOTHERAPY VESUS COMBINATION THERAPY OF CLOXACILLIN PLUS CEFTAZIDIME FOR EMPIRICAL THERAPY OF CAPD ASSOCIATED PERITONITIS: A SINGLE CENTRE EXPERIENCE.

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INTRODUCTION

PD associated peritonitis is an important cause of technique failure and mortality for PD patients. International Society for Peritoneal Dialysis (ISPD) guidelines recommend empirical antibiotics with gram positive and gram negative coverage. Our centre routinely uses intraperitoneal cloxacillin and ceftazidime as empirical therapy. Intraperitoneal cefepime may offer advantages of reducing staff burden and risk of contamination during antibiotic preparation and administration. This study compares outcomes between these 2 empirical antibiotic treatments.

CASE PRESENTATION

This is a single centre, retrospective, observational study. PD peritonitis outcomes in patients given empirical intraperitoneal cefepime between March 2022 and August 2022 were compared with patients given empirical combination antibiotics between March 2021 and August 2021. Mycobacteria and fungal PD peritonitis were excluded in this study.

RESULTS

There were 41 episodes of PD peritonitis treated with cefepime vs 37 episodes with combination therapy. Cefepime group had more significant self-care PD (70.7% vs 35.1%, $p=0.002$). Primary response in the cefepime group was 32 vs 28 in combination therapy (78% vs 75.7%, $p=0.804$). The rates of escalation of antibiotics were not significant (cefepime 85.45% vs combination 70.3%, $p=0.107$). SPICE organisms were more in combination group (6 vs 1, 16.2% vs 2.4%, $p=$

0.048), while gram positive, negative organism, and no growth rates were similar. Cefepime group significantly had more relapse PD peritonitis (5 vs 0, $p=0.034$) while recurrence episodes were comparable. Both groups had similar number of patients switched to haemodialysis permanently (cefepime 5 vs combination 6). There was 1 mortality in cefepime and none in combination group.

CONCLUSION

IP cefepime is a promising alternative empirical therapy for PD peritonitis with comparable primary response rate. Multiple confounders may have contributed to higher relapse rate. Randomize controlled trial with larger population will be needed to further examine the feasibility of empirical cefepime monotherapy for our local settings.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 176

Abstract ID: MSN2023-PD95

NON-TUBERCULOUS MYCOBACTERIUM PERITONEAL DIALYSIS RELATED PERITONITIS: A SINGLE-CENTRE EXPERIENCE

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INTRODUCTION

Non-tuberculous mycobacterium peritoneal dialysis related peritonitis (NTM PD peritonitis) is rare among infectious PD peritonitis, quoted 3% in 1 article, but with high mortality and morbidity requiring prolonged antibiotics. In this study we look at risk factors and outcomes of NTM PD peritonitis in our center.

CASE PRESENTATION

Data of patients with culture proven NTM PD peritonitis between 1st January 2020 and 31st March 2023 were collected from hospital medical records for analysis.

RESULTS

Total of 12 out of 354 (3.4%) patients with PD peritonitis were diagnosed with NTM peritonitis. 6 out of 12 (50%) end-stage kidney disease due to DM, 1 (8.3%) each due to SLE, Chronic GN and renal cortical necrosis respectively. The remaining 3(25%) have unknown primary. Their PD vintage ranged from 2 to 81 months (mean 19 months). 6 patients had no prior history of PD peritonitis; another 6 had 1 episode of peritonitis 6 to 53 months prior to NTM PD peritonitis. 58.3% (7 out of 12) patients received antibiotics within 1 month prior to NTM PD Peritonitis, mainly to cover for exit site infection. All patients had Tenckhoff catheter removed and converted to haemodialysis. Patient survival rate was 66.7%. Among 4 (33.3%) mortalities, 2 passed away during treatment due to sepsis, 1 due to encapsulating peritoneal sclerosis 15 months later, and 1 passed away at home before culture available.

CONCLUSION

Our NTM PD peritonitis prevalence is 3.4%, similar to other literature. History of antibiotics exposure seemed to increase risk of NTM peritonitis; in our analysis, 58.3% of patients with NTM peritonitis had antibiotics exposure within 1 month. However, history of previous PD peritonitis and PD vintage didn't increase risk of NTM PD peritonitis. NTM PD peritonitis mortality rate is higher than overall PD peritonitis mortality rate (33.3% vs 2-3%) in Malaysia Renal Registry.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 77

Abstract ID: MSN2023-PD96



OUTCOME COMPARISON BETWEEN PERITONEOSCOPE GUIDED VERSUS SELDINGER TECHNIQUE PERITONEAL DIALYSIS CATHETER INSERTION: A SINGLE CENTER RETROSPECTIVE STUDY

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INTRODUCTION

Peritoneal dialysis (PD) is a kidney replacement modality for patients with end stage kidney disease. It offers several benefits over haemodialysis such as patient autonomy, preservation of residual renal function and at lower cost.

CASE PRESENTATION

This is a retrospective study comparing the outcome and complication rates between peritoneoscope versus Seldinger technique for PD catheter insertion at Hospital Tengku Ampuan Rahimah. The study included 149 patients who had PD catheter inserted between 1st January 2021 and 31st December 2022. Patients were followed up for at least 3 months from catheter insertion date and clinical data was extracted from patient's medical records. Complications of interest include exit site leak, exit site infection, peritonitis, catheter malfunction and hernia.

RESULTS

A total of 129 patients (86.6%) underwent peritoneoscope guided; whereas 20 patients (13.4%) underwent Seldinger technique PD catheter insertion. In the peritoneoscope group, 48.1% of patients experienced early complications (≤ 2 weeks) compared to 30% in the Seldinger group [$p = 0.131$]. Exit site leak was significantly less in the Seldinger group (5%) compared to the peritoneoscope group (29.5%) [$p = 0.021$]. Other early complications such as exit site infection, peritonitis, catheter malfunction and hernia were not statistically significant between

the 2 groups. Late complications rates (≥ 2 weeks) were similar in the 2 groups; at 42.2% in the peritoneoscope group and 40% in the Seldinger group [$p = 0.869$]. Both groups showed a similar PD continuation rate (83.2% vs 80 %, $p = 0.759$).

CONCLUSION

Seldinger technique has a lower risk of exit site leak compared to peritoneoscope guided PD catheter insertion. PD continuation rate was similar between the 2 groups in this study.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 125

Abstract ID: MSN2023-PD97



OUTCOME OF RELAPSING PERITONITIS IN PATIENTS ON PERITONEAL DIALYSIS - A 10 YEAR SINGLE CENTRE EXPERIENCE.

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INTRODUCTION

Peritoneal dialysis (PD) related peritonitis is a major PD complication and an important cause of ultrafiltration failure and haemodialysis transfer. In relapsing peritonitis, there is a substantial risk of developing further episodes and prompt catheter removal is recommended. This study evaluates the clinical outcome of relapsing peritonitis when Tenckhoff catheter was not removed in special circumstances.

CASE PRESENTATION

All episodes of PD peritonitis in our unit from 2013 to 2022 were reviewed. All cases of relapsing peritonitis were identified and data on demographic information, PD modality, microbiology of peritonitis episodes and outcome of the episode were collected retrospectively.

RESULTS

We had analyzed 18 patients with relapsing peritonitis whose Tenckhoff catheter was not removed. Mean age was 50.2 ± 20.03 years and 66.67% was male. The microorganisms isolated in 15 patients in this group. These microorganisms were predominantly Gram positive organisms (Coagulase Negative Staphylococcus 40%, Streptococcus 13.3% species and Enterococcus Fecalis 13.3%). Among the 18 episodes of relapsing peritonitis, 14 (77.8%) resolved with no further relapsing episodes and 4 (22.2%) had a second relapse. The causative microorganisms were isolated in 3 patients whereby Coagulase Negative Staphylococcus were isolated in 2 patients and Enterococcus fecalis was isolated in 1 patient. Out of these 4 episodes, 2 resolved with no further relapse and Tenckhoff catheters was removed the other 2 patients. Tenckhoff catheters were reinserted at a later date and successfully recommenced PD.

CONCLUSION

Although relapsing peritonitis have 77.8.% cure rate in this study, they can lead to further episodes of peritonitis and consequent morbidity. In special circumstances whereby Tenckhoff catheter was not removed, patients need to be informed of the risks.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 168

Abstract ID: MSN2023-PD98

PERITONEAL DIALYSIS (PD) - ASSOCIATED NONTUBERCULOUS MYCOBACTERIUM (NTM) PERITONITIS: THE SELAYANG EXPERIENCE

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INTRODUCTION

PD-Associated NTM peritonitis is a devastating event that leads to significant morbidity and mortality.

CASE PRESENTATION

In this study, we evaluate the characteristics, clinical features, antibiotic repertoire, and outcome of 34 NTM Peritonitis cases over 27 months in Selayang Hospital.

RESULTS

Mean age was 60±14.2 years, with 53% female, and 73.5% of Malay ethnicity. PD Vintage was 19.5±19.9 months. The ESKD causes were diabetes mellitus(67.6%), hypertension(5.9%), glomerulonephritis(8.8%), lupus nephritis(2.9%) and unknown primary disease(14.7%). Automated PD comprises 17.6% while 82.4% were on manual PD and 58.8% were self-care.

Clinical features included cloudy dialysate (100%), abdominal pain (64.7%), diarrhoea (44.1%) and fever (32.4%). Symptom onset to treatment took 5.5±3.5days. AFB stain was positive in 76.4% and 88.2% had exit site/tunnel infection(ES/TI). Mycobacterium abscessus was the causative organism in 86.7%, followed by *M. fortuitum chelonae* and *M. mageritense*.

Antibiotics prescribed included Imipenem (100%), Amikacin (100%), Azithromycin (100%), Doxycycline(58.8%), Moxifloxacin(47.1%), Bactrim(14.7%), Levofloxacin(11.8%), Linezolid(8.8%) and Clarithromycin(2.9%).

Sensitivity data was available only for Mycobacterium abscessus. Clarithromycin showed 100% sensitivity, Amikacin (sensitive 94.4%, intermediate 5.6%) with other results as follows: Linezolid (sensitive 33.3%, intermediate 27.8%, resistant 38.9%), Imipenem (intermediate 44.4%, resistant 55.6%), and Moxifloxacin (resistant 94.4%), and Doxycycline and Tobramycin (sensitive 5.6%, resistant 94.4%). Both Bactrim and Ciprofloxacin showed 100% resistance.

We found that 76.5% had refractory peritonitis, 17.6% relapse peritonitis, 2.9% recurrent peritonitis, and medical cure in 1 patient (2.9%).

PD catheter was removed in 85.3% of patients and 76.5% were converted permanently to haemodialysis. Eight patients (23.5%) died while one patient(2.9%) remained on PD.

CONCLUSION

NTM peritonitis is difficult to treat, highly associated with ES/TI, and carries a significant risk of PD drop-out and mortality. One strategy glimpsed may be prevention and prompt, effective management of the ES/TI before it evolves into overt peritonitis.

Category: Doctor

Topic: Peritoneal Dialysis

Session: E-Poster Display

Submission ID: 143

Abstract ID: MSN2023-PD99