



INTRADIALYTIC HYPOTENSION, A PILL NOT TO FORGET

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INTRODUCTION AND AIMS:

Intradialytic hypotension is common and it can bring deleterious effects to patients. Autonomic dysfunction is common especially for those with diabetes mellitus and it can represent about 40% of the causes of intradialytic hypotension.

METHODS:

We report a case of 29 years old, diabetes mellitus for 10 years, hypertension, chronic kidney disease secondary to diabetic kidney disease admitted crash landed. He opted for continuous ambulatory peritoneal dialysis. While awaiting for tenckhoff catheter placement, he was started on hemodialysis via right internal jugular dialysis catheter, however he could not tolerate hemodialysis, with significant drop of blood pressure accompanied with symptoms.

RESULTS:

He only tolerated two out of twelve hemodialysis sessions with the shortest duration 5 minutes despite adjustment of the dialysis prescription. The mean pre-HD systolic blood pressure and diastolic blood pressure were (152.1±20.7), (80.8±11.0) respectively and the lowest mean systolic blood pressure and diastolic blood pressure were (90.8±22.9), (53.4±14.0) respectively. Subsequently, we started him on tablet Fludrocortisone 0.2mg 30 minutes prior to hemodialysis session and he successfully tolerated the rest of eight hemodialysis sessions. The mean pre hemodialysis systolic blood pressure and diastolic blood pressure were (144.0±18.3), (78.0±5.5) respectively and the lowest mean systolic and diastolic blood pressure post hemodialysis were (138.8±14.3), (71.7±6.3) respectively.

CONCLUSIONS:

Autonomic dysfunction is common in patients with diabetes mellitus and it is thought that the dysfunction of the sympathetic activity plays an active role in intradialytic hypotension. Fludrocortisone increases the sympathetic activity by enhancing norepinephrine released from

sympathetic neurons hence reducing the incidence of intradialytic hypotension.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 4-4



THE TWENTY-ONE-MONTH EXPERIENCE OF TENCKHOFF CATHETER INSERTION VIA SELDINGER METHOD IN A TERTIARY HOSPITAL IN MALAYSIA

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INTRODUCTION AND AIMS:

Tenckhoff catheter can be inserted via various methods by different expertise with comparable outcomes. This study is to investigate the outcomes of Tenckhoff catheter inserted via Seldinger method in a tertiary hospital in Malaysia.

METHODS:

This is a retrospective observational study. All patients with Tenckhoff catheters inserted via Seldinger method from August 2018 to April 2020 are included. Patients' medical records and procedure census were traced and reviewed.

RESULTS:

Total of 86 patients have been identified. Mean age 54.3 years; Male 52.3%. All patients were diagnosed to have end stage renal disease (ESRD), with the mean ESRD vintage of 6.2 weeks prior to Tenckhoff catheter insertion. Mean follow up period was 10.2 months. 66 insertions (76.7%) were successful. Reasons of failed insertion were mostly due to resistance when advancing guide wire (16/20, 80%). 45 patients (52.3%) used this catheter for long term peritoneal dialysis while 41 patients (47.7%) used it as temporary dialysis access for intermittent peritoneal dialysis. Among those with successful insertion (N=66), 6 (9.0%) had primary dysfunction, while the rest were able to commence their

CONCLUSIONS:

The scoring system was specific and sensitive at a cutoff score of > 6. A internal validation study is recommended to assess the usefulness of the scoring system in predicting stone formation in children.

dialysis. Mean break-in period was 8.6 days. In this sub-group with functioning catheters (N=60), 2 (3.3%) had leakage; 4 (6.7%) had blood stained peritoneal effluent; 5 (8.3%) had exit site infection; 13 (21.7%) had peritonitis. All of these complications were managed successfully without catheter removal. However, 8 (13.3%) had migrated Tenckhoff catheter, with mean time to event 8.6 weeks, and in which 5 (62.5%) resulted in catheter removal. Overall catheter survival is 70%. Three mortalities occurred but were not related to this procedure.

CONCLUSIONS:

Our twenty-one-month experience showed that Tenckhoff catheter insertion via Seldinger technique is a safe procedure. It allows timely initiation of peritoneal dialysis, avoiding temporary hemodialysis catheter insertion and its complications. Our data is comparable with a few local and international studies.

Category: Medical

Session: Oral + e-Poster

Topic: *Peritoneal Dialysis*

Abstract ID: 6-5

Category: Medical

Session: e-Poster

Topic: *Pediatric Nephrology*

Abstract ID: 6-7



HEIGHT ADJUSTED TOTAL KIDNEY VOLUME (HTTKV) USING MRI AND AGE AT HTTKV IN PREDICTING DECLINE OF RENAL FUNCTION IN PATIENT WITH AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE.

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INTRODUCTION AND AIMS:

Autosomal dominant polycystic kidney disease (ADPKD) has a long natural history with variable time of progression to end stage kidney disease. This makes the prediction on the disease progression difficult. HtTKV0 measurement using MRI at a single point of time adjusted with age0 was recognised as a strong predictor for kidney disease progression in ADPKD when used with Mayo ADPKD calculator(MAC). There was no prospective study examining the applicability of MAC in Asian ADPKD cohort and hence we conducted this study.

METHODS:

Consecutive sampling was done at University Malaya Medical Centre renal-outpatient clinic from January 2020 to March 2021. Patients who met inclusion criteria were subjected to single non-contrasted T2W-MRI kidney scan using ellipsoid method with urine and blood samples collection for analysis. Patients will be followed up 6-monthly for 2 years. Total kidney volume(TKV) was measured by 2 radiologists and the average of 2 RESULTS: was recorded for analysis.

RESULTS:

Ninety-three patients were approached but fifty were recruited. The analysis showed median age of 39.5 (IQR 33.5-58.0), median height of 1.63m (IQR 1.58-1.70), and median first estimated glomerular-filtration-rate(eGfr0) of 83.0ml/min/1.73m² (IQR 46.0-110.3). This cohort comprised 54% female, 60% Chinese-Malaysian, and 74% has family history of ADPKD.

Spearman's correlation coefficient (CC) was used for analysis. TKV measurement by radiologists A and B has very strong correlation (CC= 0.98), median difference = 82.73 (IQR -20.97 to 187.87), p<0.001. eGfr0 strongly correlates

with HtTKV0 (CC = -0.55), p<0.001, and age0 (CC = -0.61), p<0.001. HtTKV0 has strong correlation with Irazabal classification (CC= 0.74), p<0.001. eGfr0 from this cohort has a very strong correlation with the estimated gfr0 generated from MAC (CC = 0.99), p<0.001.

CONCLUSIONS:

Malaysian ADPKD HtTKV0 at age0 correlates with MAC. However, longer follow-up is required to assess if the progression of renal function conforms to MAC prediction.

Category: Medical

Session: Oral + e-Poster

Topic: Basic Science

Abstract ID: 9-8



OCCULT KIDNEY DYSFUNCTION IN CHILDREN WITH TRANSFUSION-DEPENDENT THALASSEMIA

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INTRODUCTION AND AIMS:

Thalassemia is the commonest hemoglobinopathy in South East Asia. Kidney dysfunction is an under-reported sequelae in children with thalassemia.

METHODS:

We conducted a retrospective study to identify the prevalence of and predisposing factors for kidney dysfunction in children with TDT. In this study, we defined glomerular hyperfiltration as eGFR of $>140\text{ml}/1.73\text{m}^2/\text{min}^{1.73}$. Abnormal kidney function, however, were those with GFR of $<90\text{ml}/\text{min}/1.73\text{m}^2$, decline in GFR of more than $20\text{ml}/\text{min}/1.73\text{m}^2$ within 3 years, or presence of nephrotic range proteinuria. Data analyzed were age at diagnosis of thalassemia, number of years dependent on transfusion, iron chelation therapy, serum ferritin, and pre-transfusion hemoglobin levels.

RESULTS:

Eighty-one children were studied. The median age was 11.4 ± 5.3 years. Thirty out of 81 (37%) demonstrated abnormal kidney function. Evidence of glomerular hyperfiltration was seen in 29/81 patients (25.85%) at their last clinic visit. This fraction was doubled [48/81 (59.3%)] when the cohort was tracked back by 3 years from the last clinic encounter.

Age at diagnosis (RR, 0.858; 95% CI, 0.754–0.976; $p = 0.02$) and duration of receiving transfusions (RR, 1.03; 95% CI, 1.010–1.051; $p = 0.003$) were associated with increased risk of developing abnormal kidney function.

CONCLUSIONS:

Abnormal kidney function in children with TDT may be overlooked by medical personnel without active screening measures. Children receiving regular red cell transfusions require systematic surveillance to enable early detection of kidney dysfunction and timely implementation of appropriate therapeutic interventions.

Category: Medical

Session: e-Poster

Topic: Pediatric Nephrology

Abstract ID: 10-9



FIRAPY STUDY: FAR INFRARED THERAPY IN PROMOTING EARLY ARTERIOVENOUS FISTULA MATURATION. A PROSPECTIVE RANDOMISED CONTROLLED STUDY

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INTRODUCTION AND AIMS:

Haemodialysis is the most preferred treatment modality for renal replacement therapy in Malaysia with arteriovenous fistula (AVF) is the commonest choice for haemodialysis access. The fistula may need a long period of at least 6 weeks for maturation before being able to be used. While waiting for maturation, patients usually end up with temporary venous catheter which has a high catheter-related blood stream infection rate. We present this interim result of this study which evaluate the effect of Far-Infrared Therapy (FIR) in reducing the duration for AVF maturation, and long-term patency of the AVF in patients with End-Stage Renal Failure.

METHODS:

77 patients who visited vascular clinic of University Malaya Medical Centre for new AVF creation were enrolled into treatment (n=37) and control (n=40) groups. A KP B-220 Far infrared Therapy Unit applied onto the fistula after creation for 40 minutes twice a day, for 1-month duration. Venous limb diameter and flow (Qa) was measured at 2 weeks, 4 weeks, and 6 weeks after AVF creation. The outcome that we investigated is early fistula maturation at 4 weeks.

RESULTS:

In comparison to controls, patient in intervention group had higher maturation rate at 4 weeks (70.2% vs 32.5%, p=0.0009); larger AVF diameter at 4 and 6 weeks; and higher Qa values at 4 weeks (760.7±426.9 vs 588.3±337.2, p = 0.03).

CONCLUSIONS:

Far infrared therapy increases the maturation rate with improved access blood flow in a newly created AVF in End-stage renal failure patients.

Category: Medical

Session: Oral + e-Poster

Topic: Hemodialysis

Abstract ID: 13-10



CARDIOVASCULAR OUTCOME BASED ON ECHOCARDIOGRAPHIC FINDINGS IN PEDIATRIC KIDNEY TRANSPLANT PATIENTS AT A TERTIARY GOVERNMENT HOSPITAL

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INTRODUCTION AND AIMS:

Cardiovascular disease is an important cause of mortality in children with end-stage renal disease (ESRD). Left ventricular hypertrophy (LVH), is a prevalent cardiovascular finding in patients with ESRD including renal transplant patients (50-70%). Renal transplant is the most acceptable treatment modality for patients with ESRD because it improves some complications of renal failure such as chronic uremia and volume overload. It is reported that successful renal transplantation has positive effects on ventricular hypertrophy and could regress LVH and improve left ventricular ejection fraction (LVEF).

Category: Medical

Session: e-Poster

Topic: Transplant

Abstract ID: 15-12

METHODS:

This is an ambispective cohort study which aimed to evaluate cardiovascular outcome based on echocardiography in patients before and after renal transplantation.

RESULTS:

A total of 31 pediatric post-kidney transplantation patients were included in the study, 62% of which were female. There were statistically significant changes seen in the anthropometric and laboratory parameters of the patients as proven by all p values <0.05. A statistically significant improvement control of hypertension post-transplantation was also seen (p<0.05).

CONCLUSIONS:

There were statistically significant changes seen in the anthropometric and laboratory parameters, as well as control of blood pressure of the patients after kidney transplantation. 2d echocardiography studies of the subjects showed an increase in LVEF and a decrease in the incidence of LV hypertrophy, mitral regurgitation and tricuspid regurgitation.



SGLT2 INHIBITOR-INDUCED EUGLYCEMIC DIABETIC KETOACIDOSIS: A CASE REPORT

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INTRODUCTION AND AIMS:

Sodium-glucose cotransporter-2 (SGLT2) inhibitors are promising novel agents in the treatment of diabetes. However, a rare but serious complication i.e euglycemic diabetic ketoacidosis (euDKA) pose threat to patients. It remains a challenge to the treating physician especially in emergency department to diagnose this condition.

METHODS:

This is a case report of a patient who was referred to nephrology unit for metabolic acidosis.

RESULTS:

A 42 years old man who had been newly diagnosed with diabetes and hypertension presented with vomiting and abdominal pain for the duration of three days and poor oral intake for 1 week. He was started on empagliflozin, perindopril and amlodipine just two weeks prior to the complaints. On arrival his blood glucose was 8 mmol/L with metabolic acidosis with pH 7.168, HCO₃ 10.8 mmol/L and anion gap of 20. Urine ketone was positive (2+). Other causes of high anion gap metabolic acidosis were ruled out including lactate acidosis, methanol poisoning and uraemia. The final diagnosis of euDKA was made in view of the SGLT2 intake with high anion gap metabolic acidosis, ketonuria and normal glucose level. He was started on IVI insulin and hydration per DKA protocol and subsequently the metabolic acidosis resolved.

CONCLUSIONS:

Patients on SGLT2 inhibitors with high anion gap metabolic acidosis need to be evaluated for euDKA as they may present with relatively normal blood glucose level. Detailed drug history with a high index of suspicion is of paramount importance to diagnose euDKA.

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 16-13



THE COGNITIVE FUNCTION AND ITS ASSOCIATION AMONG DIABETIC VERSUS NON-DIABETIC PATIENT RECEIVING MAINTENANCE HAEMODIALYSIS

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INTRODUCTION AND AIMS:

Cognitive impairment is a significant problem among haemodialysis patients and contributes to high mortality. We assessed cognitive function in this population, with or without the presence of diabetes mellitus. We also evaluated the associated factors with cognitive derangement.

METHODS:

This was a prospective unmatched case-controlled study using The Montreal Cognitive Assessment (MOCA) score among the patients on chronic haemodialysis, comparing those with diabetes (DM-HD) versus the non-diabetic (NDM-HD). An interview session was conducted during haemodialysis session. Health record data and biochemistry data were obtained from the patient's medical record in the dialysis centre. Factors associated with the cognitive impairment were analysed using the SPSS 26.

RESULTS:

A total of 128 patients were enrolled. Our NDM-HD patients were significantly younger (49 ± 13.9) than DM-HD (57.4 ± 7.5) years old. The majority of the DM-HD patients had a lower educational level ($p < 0.05$) and had a longer ESKD diagnosis duration. Most of them were still working with higher income in the NDM-HD group compared to DM-HD ($p = 0.012$). Dyslipidaemia, gout, and stroke were significantly associated with both groups ($p < 0.05$). Cognitive assessment in NDM-HD patients showed a higher MOCA score with the median MOCA score of 25 (IQR11-30). We also found a significant difference in all cognitive domains among NDM-HD patients and DM-HD patients ($p < 0.05$) except for naming and attention scores. Our study showed a significant association between diabetes and cognitive impairment ($p < 0.05$). Overall, we also found that cognitive impairment was significantly associated with age, marital, educational, and occupational status ($p < 0.05$).

CONCLUSIONS:

Our study highlighted a significantly high prevalence of cognitive impairment among NDM-HD and DM-HD patients. However, DM patients had a higher risk due to more comorbidities. Thus, individualised care should be implemented to ensure adherence to treatment strategy to improve their health outcome.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 11-14



EPIDEMIOLOGY AND OUTCOME OF ACUTE KIDNEY INJURY IN ADULT PATIENTS IN GENERAL INTENSIVE CARE UNIT HOSPITAL PULAU PINANG

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INTRODUCTION AND AIMS:

Acute kidney injury (AKI) is common among critically ill patients. The epidemiology data of AKI in intensive care units (ICU) is still limited in the Malaysian context. We conducted an epidemiological study in Hospital Pulau Pinang to study the incidence, risk factor, and outcome of acute kidney injury.

METHODS:

This was a single-centre, retrospective, cross-sectional study. All patients older than 18 years admitted to the general intensive care unit in the period 1 July 2018 to 31 December 2018 were screened for inclusion in this study. Cases of regular renal replacement therapy, ICU readmissions, and missing medical records were excluded. We reviewed medical records for the following information: demography, comorbidities, primary reasons of admission to ICU, laboratory investigation, renal replacement therapy, renal recovery and mortality.

RESULTS:

A total of 234 subjects were sampled. Of these, 171 (70.4) subjects had AKI, of which 45 (19.1%) were stage 1; 25 (10.6%) were stage 2; and 101 (42.8%) were stage 3.

Independent risk factors for AKI include older age, septic shock, admission for cardiovascular diseases, with adjusted odds ratios of 1.02 [1.00-1.04], 10.34 [3.90-27.39], and 10.08 [1.29-78.88], respectively.

Sixty-six subjects required renal replacement therapy (RRT). Of these, 55 (83.3%) received intermittent RRT, 16 (24.2%) received continuous RRT, while 5 (7.6%) received both intermittent and continuous RRT.

The 28-days mortality rate for no AKI, KDIGO Stage 1, KDIGO Stage 2, KDIGO Stage 3 were 1.5%, 20%, 24%, 53.5% respectively.

Out of the 42 subjects in KDIGO Stage 3 that survived, 26 (61.9%) subjects had full renal recovery upon discharge; 6 (14.3%) had partial renal recovery; 10 (23.8) had no renal recovery.

CONCLUSIONS:

Acute kidney injury is common in our ICU. The majority is of KDIGO Stage 3, which is associated with high mortality.

Category: Medical

Session: e-Poster

Topic: Basic Science

Abstract ID: 18-15



FACTORS ASSOCIATED WITH 25(OH)D DEFICIENCY AND SURVIVAL OUTCOME AMONG SARAWAK PATIENTS RECEIVING MAINTENANCE DIALYSIS

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INTRODUCTION AND AIMS:

ESRD is associated with increased risk of 25(OH)D deficiency. Other reported risk factors include age, female gender, BMI, diabetes mellitus (DM) and albumin level. Vitamin D status and its association with outcome among dialysis patients in Malaysia is generally unknown. We aim to determine factors and outcome associated with Vitamin D deficiency among end stage renal disease (ESRD) patients

METHODS:

Cross sectional study involving maintenance haemodialysis (HD) and peritoneal dialysis (PD) patients. Patients were recruited from Nov 2015 to Sep 2016 and followed up till 31 Dec 2019. Patients were labelled as vitamin D insufficient if 25(OH)D levels were 20-30 ng/ml, and deficient if levels were < 20 ng/ml. Risk factors for 25(OH)D deficiency and outcomes were assessed using Chi-square test and adjusted using multiple regression analysis.

RESULTS:

170 patients were recruited, 101 on HD and 69 on PD. 49.3% of our PD patients were vitamin deficient compared with only 7.9% among HD patients. Compared to HD patients, PD patients reside mainly in urban areas, have higher education level, diuretic usage, shorter dialysis duration, and lower albumin, magnesium level. Multiple logistic regression analysis showed that low serum albumin, phosphate, magnesium level, male gender and DM were significantly associated with 23(OH)D deficiency in our dialysis patients. Chi Square tests showed that patients who were Vitamin D deficient had higher mortality compared to those with 25(OH)D > 20 ng/ml (mortality 35.71% vs 13.28%, p=0.001) but there was no difference in relation to Vitamin D treatment or need for parathyroidectomy

CONCLUSIONS:

Vitamin D deficiency is highly prevalent among our PD patients, and is associated with higher mortality. Vitamin D supplementation in at risk population may improve outcome.

Category: Medical

Session: e-Poster

Topic: Mineral Bone Disease

Abstract ID: 19-16



RETINAL MICROVASCULAR CHANGES IN CHRONIC KIDNEY DISEASE (CKD)

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INTRODUCTION AND AIMS:

Chronic kidney disease (CKD) carries high morbidity and mortality and diabetes mellitus (DM) is the leading cause. Microvascular changes in the retinal could represent renal microvascular changes in CKD. Hence, we wanted to determine the association of retinal vascular caliber, tortuosity and macula volume in CKD-DM, CKD Non-DM and compare with healthy controls.

METHODS:

A comparative cross-sectional study involving CKD patients attending our medical specialty clinic follow up from August 2019 to January 2020. Healthy population was recruited as controls. Demographic data, routine blood and urine tests were collected followed by eye assessment. Their fundi images were photographed, and retinal vessels caliber and tortuosity were quantified using a computer-assisted program and macula volume was obtained using optical coherent tomography (OCT).

RESULTS:

Hundred CKD patients were recruited (55 females, 37 males) with median age of 55 years old (IQR 48-62). Their median eGFR was 27.18(IQR 17.50-35.15) mL/min/1.73m³. Fifty healthy controls with median age of 34 years old (IQR 28-36) were enrolled. Seven patients from CKD DM arm and 1 patient from CKD Non-DM arm were excluded from analysis. The median diameter of macula volume in CKD was 9.7 (IQR 9.3-10.0) and significantly reduced compared to healthy control 10.2 (IQR 9.9-10.6), (p <0.001). However, the macula volume was comparable in CKD DM and CKD non-DM group and no different with CKD severity. No significant differences in retinal tortuosity, central retinal arteriolar equivalent (CRAE), central retinal venular equivalent (CRVE) between CKD groups and healthy controls. On multiple linear

regression, LDL (b 0.198, p 0.004) and smoking (b -0.584, p = 0.017) were independent determinants for macula volume. BMI was positively correlated with retinal tortuosity and CRVE.

CONCLUSIONS:

Macula volume was significantly reduced in CKD. Smoking and LDL were independent determinants for macula volume.

Category: Medical
Session: e-Poster
Topic: Others
Abstract ID: 5-18



A SINGLE CENTER OBSERVATIONAL STUDY ON FILTER SURVIVAL IN HEPARIN FREE CONTINUOUS RENAL REPLACEMENT THERAPY (CRRT)

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INTRODUCTION AND AIMS:

Continuous renal replacement therapy (CRRT) is often required in patients with severe acute kidney injury especially when haemodynamically unstable. Systemic anti-coagulation in CRRT may predispose critically ill patient to risk of bleeding. The use of heparin free CRRT is thus frequently adapted in this circumstance. The aim of the study is to measure filter survival in heparin free CRRT and its significant predictors.

METHODS:

This retrospective cohort study was conducted by collecting data from all patients undergone CRRT from 1st October 2019 to 31st March 2020, in Hospital Raja Perempuan Zainab II (HRPZ II). A total of 76 patients were included in the study in which 71 patients received heparin-free CRRT. Variables collected include demographic profiles, clinical data and other laboratory & circuit parameters that may affect filter survival. Multivariable cox regression analysis was utilised to identify predictors of filter survival in heparin-free CRRT. Event was defined as clotted filter while electively ceased CRRT was censored.

RESULTS:

Majority of patients were male (59.2%) and Malay (96.1%) with mean age of 53.76 years (SD=17.31), mostly admitted due to severe sepsis (85.5%). The mean filter survival was 20.0 hours (15.53) with 29.6% reported filter survival of more than 24 hours. Using multiple cox regression analysis, only flow rate ($\beta=-0.017$, adjusted HR 0.983, 95% CI 0.972, 0.993, $p=0.002$) & age ($\beta=0.023$, adjusted HR 1.023, 95% CI 1.002, 1.045, $p=0.034$) were found to be significant predictors for filter survival while other variables of vascular access site, mode of CRRT, platelet, blood pH and aPTT level were excluded in the final model. Kaplan-Meier curve

demonstrated longer filter survival time among those with flow rate 180 ml/min and above ($p=0.03$).

CONCLUSIONS:

The mean filter survival in the studied hospital is comparable to other studies. Higher flow rate & younger age were found to prolong filter survival.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 23-19



PAEDIATRIC ANTINUCLEAR ANTIBODY NEGATIVE FULL-HOUSE NEPHROPATHY : A CLINICAL CONUNDRUM

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INTRODUCTION AND AIMS:

Lupus nephritis is common in paediatric systemic lupus erythematosus (SLE). In 2019, a joint position recommended ANA as an entry criterion to diagnose SLE. Presence of "Full-house" immunoglobulin deposits is a unique feature for histopathological diagnosis in lupus nephritis. There have been reports on a possible incomplete form, when the characteristic Full-house Nephropathy (FHN) is seen in isolation. We report 2 cases of ANA negative FHN and review the paediatric literature on this clinical entity

Category: Medical

Session: e-Poster

Topic: *Paediatric Nephrology*

Abstract ID: 25-20

METHODS:

Two girls, aged 3 and 9 years old presented with acute onset renal impairment. One needed temporary dialysis support. Both showed hypocomplementemia and biopsies concurred with FHN. Ironically, Antinuclear antibody (ANA) was absent in both.

RESULTS:

They achieved complete remission soon after immunosuppressive therapy and disease in quiescent until today. ANA remained negative during surveillance.

CONCLUSIONS:

Natural history of this entity remains uncertain albeit most literature reported apparent long term "remission" following initial episode. Clinician could monitor for emergence of autoantibodies for possible SLE in future. To the child and his/her caregiver, this may end up a perpetual mental stress. Striking a balance is necessary. This calls for expert consensus on reasonable long term management and surveillance.



CLINICAL OUTCOME OF BIOPSY PROVEN FOCAL SEGMENTAL GLOMERULOSCLEROSIS: A SINGLE CENTRE AUDIT IN KELANTAN

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INTRODUCTION AND AIMS:

Focal segmental glomerulosclerosis (FSGS) is the most commonly encountered biopsy proven primary glomerulonephritis in adults, with a poorer long-term outcome compared to minimal change disease. We attempt to evaluate clinical outcome of biopsy proven primary FSGS in our community.

METHODS:

This is a retrospective observational audit of all biopsy proven primary FSGS who underwent renal biopsy at our centre from January 2015 to December 2019. Data was obtained from procedure log books and relevant clinical information was extracted from patient electronic records. Statistical analysis was performed using SPSS, version 26.

RESULTS:

35 patients were identified with a mean age of 29.3 ± 9.9 years. The majority were male (62.9%) and Malay (91%). 71.4% presented with nephrotic syndrome while the rest were investigated for asymptomatic proteinuria. All except 1 patient received immunosuppressants. 85.7% were induced with high dose prednisolone (HDP), of which 70% received additional Cyclosporine while 16.7% received additional Mycophenolate Mofetil (MMF). 68.6% were concurrently on Angiotensin Converting Enzyme (ACE) inhibitor. The median duration of treatment with HDP and the median time to achieve remission was both 4 months. Clinical response was best at 4 months with 68.6% achieving remission. There was significant improvement of 24-hour urine protein, serum albumin and oedema ($p < 0.001$). Mean creatinine also showed reduction from $124.4 \text{ mcmol/l} \pm 95.8$ to $95.6 \text{ mcmol/l} \pm 50.2$ ($p = 0.05$). At one year post treatment initiation, only 43.5% of patients were in remission, 21.7% had no response, 26.1% progressed to chronic kidney disease (CKD) and 1 patient defaulted follow up. The default rate increased to 42.9% at 2 years.

CONCLUSIONS:

Clinical remission rate was not sustained at 1 year of treatment initiation and default rate is high. Further studies are needed to address poor compliance to treatment to reduce the rate of progression to CKD.

Category: Medical

Session: e-Poster

Topic: Glomerulonephritis

Abstract ID: 26-21



DESCRIPTIVE ANALYSIS AND DIAGNOSTIC ADEQUACY OF PERCUTANEOUS RENAL BIOPSIES: A SINGLE CENTRE AUDIT IN KELANTAN

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INTRODUCTION AND AIMS:

Renal biopsy is a core procedure routinely performed in nephrology units worldwide to provide diagnosis, prognosis and guide treatment. We aim to analyse the demographic and clinical data of patients requiring renal biopsies in our centre and assess the diagnostic adequacy.

METHODS:

This is a retrospective observational study conducted in Hospital Raja Perempuan Zainab II, Kelantan by collecting renal biopsy data from procedure logbooks and extracting clinical information from patient electronic records from January 2017 to December 2019. Presence of at least 10 glomeruli was considered adequate with graft biopsies needing additional 2 arteries. Statistical analysis was executed using SPSS version 26.

RESULTS:

184 renal biopsies were conducted (180 native, 4 graft) with increasing adequacy over the 3 years (68.9% in 2017, 75.0% in 2018 and 84.0% in 2019). 31.0% of all biopsies had at least 20 glomeruli for evaluation, 46.7% had 10-19 glomeruli while 22.3% had less than 10 glomeruli. Mean age was 29 ± 10.7 years with female (73.4%) and Malay (96.7%) predominance. 6.5% had diabetes and 25% had hypertension at the time of biopsy. 85.4% had 24-hour urine protein more than 1g/day and 38.6% had eGFR $<60\text{ml}/\text{min}/1.73\text{m}^2$. After excluding suboptimal samples, 63.4% of native biopsies were secondary glomerulonephritis (GN) while 36.6% were primary GN (n = 164). Focal Segmental Glomerulosclerosis (FSGS) was the most common primary GN (53.3%) while lupus nephritis led the secondary GN (90.4%) which was more common amongst female (90.4%, $p < 0.001$). The pre-biopsy parameters were worse in primary GN with higher mean 24-hour urine protein (5.8 ± 4.5 g/day, $p < 0.001$), lower serum albumin (27 ± 11.5 g/L, $p < 0.001$) and higher serum creatinine (179.4 ± 216.7 $\mu\text{mol}/\text{l}$, $p = 0.02$).

CONCLUSIONS:

Diagnostic adequacy increased over time suggesting improved technique. Lupus nephritis is the most common biopsy proven GN in our centre followed by primary FSGS.

Category: Medical

Session: e-Poster

Topic: Glomerulonephritis

Abstract ID: 26-22



CATHETER-RELATED MYCOBACTERIUM ABSCESSUS BACTEREMIA IN ESRD PATIENTS DIALYSED VIA INDWELLING CENTRAL VENOUS CATHETER

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INTRODUCTION AND AIMS:

Catheter-related blood stream infection (CRBSI) caused by rapidly growing mycobacteria (RGM) is now increasingly encountered, especially among patient using dialysis catheters as an access. Immunocompromised status and the presence of an indwelling central venous catheter are the frequently reported risk factors for the development of RGM bacteremia: most of which involve species such as *M. fortuitum*, *M. chelonae*, and *M. abscessus*.

RESULTS:

We reported two cases of end stage renal disease (ESRD) patients who had catheter-related *M. abscessus* bacteremia confirmed by positive blood cultures of specimens taken from the hemodialysis catheter and a peripheral vein.

First case is a 59 year old female patient with ESRD with catheter-related *M. abscessus* bacteremia two months after implantation of a cuffed internal jugular catheter. She achieved bacteremia clearance after seven days of intravenous imipenem, amikacin and oral azithromycin. However she refused removal of the cuffed catheter.

Second case is a 52 year old male patient with ESRD on regular hemodialysis via a temporary internal jugular catheter. He was admitted in February 2021 for Covid-19 infection. He had catheter related ESBL *Klebsiella pneumoniae* bacteremia during the hospitalization and the catheter was removed and carbapenem was administered . The surveillance blood cultures from new catheter grew *M. abscessus*. His temperature settled with the administration of intravenous imipenem, amikacin and oral azithromycin and removal of the hemodialysis catheter. Whole body computed tomography (CT) and echocardiography did not demonstrate any dissemination of this infection in both cases.

CONCLUSIONS:

RGM bacteremia is relatively rare in CRBSI. With appropriate laboratory diagnosis, *M. abscessus* bacteremia infections can improve with catheter removal and combination of antimicrobial therapy.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 27-23



HYDROTHORAX IN PERITONEAL DIALYSIS

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INTRODUCTION AND AIMS:

Peritoneal dialysis (PD) related hydrothorax is an important complication to be recognized and treated. We described 2 cases of hydrothorax following initiation of PD.

METHODS:

We present 2 patients who complained of reduced effort tolerance and poor ultrafiltrate following weeks of initiation of peritoneal dialysis. Both were diagnosed to have right pleural effusion, which were transudative in nature with high pleural fluid glucose compared to random blood sugar. Both patients were placed on temporary haemodialysis for 4 weeks. Unfortunately one of the patients developed iatrogenic right hemothorax following insertion of right internal jugular catheter requiring right chest tube drainage. Scintigraphy performed subsequently showed communication between right pleural and peritoneal cavity in 1 patient while the other patient who sustained iatrogenic hemothorax was negative. Following that, CAPD was restarted in both patients after 4 weeks with no recurrence of hydrothorax and both are doing well with CAPD.

RESULTS:

There are a range of conservative and invasive treatment options for pleuroperitoneal fistula (PPF). Conservative approach involves cessation of PD and conversion to temporary hemodialysis for 2-4 weeks. Should conservative measures fail, chemical pleurodesis is the next step. This involves instillation of irritants into the pleural cavity via an intercostal catheter. Another treatment option is surgical correction, which may be performed through open surgery thoracotomy, or video-assisted thoracoscopic surgery, which allows for identification and closure of PPF. In our case series, scintigraphy of the iatrogenic hemothorax patient was negative, this can be explained due to the iatrogenic hemothorax, which acted as a sclerosing agent in closing the PPF.

CONCLUSIONS:

With increasing PD patients, PD related hydrothorax is an important complication to be recognised by nephrologists and physicians so that appropriate treatment can be instituted.

Category: Medical

Session: e-Poster

Topic: *Peritoneal Dialysis*

Abstract ID: 28-24



NON-TUBERCULOUS MYCOBACTERIAL PERITONITIS IN PERITONEAL DIALYSIS: A CASE SERIES

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INTRODUCTION AND AIMS:

Peritoneal Dialysis (PD)-associated peritonitis is one of the most significant complications caused by improper hygiene and poor technique leading to contamination of dialysate and spread of exit-site or tunnel infection. PD-associated peritonitis caused by non-tuberculous mycobacteria (NTM), including *Mycobacterium abscessus* (*M. abscessus*), is a rare but serious complication which leads to PD withdrawal and mortality.

METHODS:

We report 3 cases of PD-associated peritonitis caused by *M. abscessus* in our centre.

RESULTS:

All 3 patients have underlying Type 2 Diabetes Mellitus and hypertension. Their Tenckhoff (TK) catheters were inserted one to two years ago. In one patient, peritonitis developed after a chronic pseudomonas exit site infection, requiring incision and drainage with cuff shaving. All 3 of them presented with the typical signs of cloudy effluent and elevated PD fluid cell count. All patients were started on empirical intraperitoneal antibiotics consisting of cloxacillin and ceftazidime. Though only one of them had positive Acid Fast Bacilli (AFB) stain, PD fluid culture subsequently yielded *M. abscessus* in all three of them. Their TK catheters were removed, and targeted multi-antibiotic treatment was started with guidance from the Infectious Disease team. Unfortunately, outcome was poor and all 3 patients eventually succumbed, either from the disease itself or later on from another superimposed infection.

CONCLUSIONS:

The combination of amikacin, clarithromycin, and imipenem with TK catheter removal have been advocated as the treatment of non-tuberculous mycobacterial PD peritonitis. The prognosis is generally poor, and requires high index of suspicion especially in culture-negative PD peritonitis. Initial AFB stain may be helpful but does not exclude non-tuberculous mycobacterial infection.

Category: Medical

Session: e-Poster

Topic: *Peritoneal Dialysis*

Abstract ID: 29-25



HEMODIALYSIS CATHETER RELATED HEMATOMA: INCIDENCE AND RISK FACTORS, A MULTICENTRE STUDY IN KELANTAN

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INTRODUCTION AND AIMS:

Hemodialysis (HD) catheter insertions have been rising with increasing burden of acute kidney injury and end stage kidney disease. With that comes increasing complications. Unlike catheter related infections, hematoma is less studied. We aim to determine the incidence and risk factors of catheter related hematoma to improve outcomes.

METHODS:

This is a multi-centre, retrospective cross-sectional study conducted in HRPZ II and HUSM. Study data was extracted from catheter request forms cross referenced with medical records of patients with temporary HD catheters inserted between 1st June 2020 and 30th September 2020. Statistical analysis executed with SPSS version 21.

RESULTS:

591 temporary HD catheters were inserted over 4 months. The overall incidence of hematoma was 7.8% (n=46) with higher rates in HUSM (13% vs 6.7%, p=0.03). Majority were minor hematoma. Incidence of major hematoma was 1.0% (n=6). Majority of those with hematoma had urea ≥ 30 mmol/L (82.3% vs 56.8%, p=0.01). Other associate factors are unsuccessful cannulation (39.5% vs 5.3%; p<0.05), need for 2nd operator (23.2% vs 5.3%; p<0.05), arterial puncture (42.1% vs 5.4%; p<0.05) and multiple attempts which increased hematoma risk from 3.2% with 1 attempt to 22% with ≥ 3 attempts (p<0.01). Multiple logistic regression predicted high urea and arterial puncture to significantly increase risk of hematoma with adjusted odds ratio (aOR) 1.024 (95% CI 0.999-1.050) and 9.73 (95% CI 4.189 - 22.602) while Nephrology doctors as operators [aOR 0.401 (95% CI 0.194 – 0.832)] and successful cannulation [aOR 0.108 (95% CI 0.048 – 0.244) reduced its risk.

CONCLUSIONS:

Although the total incidence of catheter related hematoma is considerably high, major hematoma incidence is low. High urea, arterial puncture, non-nephrology based operators and unsuccessful cannulation increases its risk. More doctors should be trained via supervised nephrology attachment programmes. We recommend a follow-up audit one year later for quality improvement.

Category: Medical

Session: Oral + e-Poster

Topic: Hemodialysis

Abstract ID: 26-26



IS BEDSIDE SELDINGER TENCKHOFF CATHETER INSERTION SAFE AND WHAT IS THE 30 AND 90 DAYS CATHETER SURVIVAL RATE? A STATEWIDE EXPERIENCE IN YEAR 2020

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INTRODUCTION AND AIMS:

Although peritoneal dialysis is known as the most cost effective dialysis modality, PD is still underutilized around the world. In 2020, we introduced bedside Seldinger Tenckhoff catheter (TC) insertion. We aim to review all bedside Seldinger TC insertions done in Queen Elizabeth Hospital, Sabah in the year 2020 for successful insertion rate, immediate and early (within 4 weeks insertion) complications as well as 30 and 90 days catheter survival rate.

METHODS:

This is a retrospective review where all data on bedside TC insertions from 1 January - 31 December 2020 were recorded and data analysed

RESULTS:

In 2020, there were a total of 152 attempts for bedside Seldinger TC insertion where 149 (98%) of them were successful. There were 52 females and the mean age was 45.8 (SD 15.5). Only 14 (9.4%) insertions had minor bleeding which resolved spontaneously with 8 having hemoserous effluent, 5 exit site bleeding and 1 rectus hematoma. The rest (n=135, 90.6%) were uneventful. Two patients passed away prior to PD training due to unrelated causes and the remaining 147 cases were analysed for early complications, 30 and 90 days catheter survival rate. There were 12 (8.2%) primary catheter malfunctions, 7 (4.8%) cases of early peritonitis and 5 (3.4%) cases of exit site leaking. The 30 and 90 days catheter survival rates were 92.5% and 90.5% respectively.

CONCLUSIONS:

Bedside Seldinger TC insertion has a high success rate. Immediate complication comprised of only minimal bleeding that was not life threatening. Bowel perforation, which is the most feared complication, did not occur in our case series. Apart from that, primary catheter malfunction rate was low while the 30 and 90 days TC survival rates were high, making this method of insertion not only safe but with low immediate and early complication rates.

Category: Medical

Session: Oral + e-Poster

Topic: Peritoneal Dialysis

Abstract ID: 28-27



SERUM PROTEIN ELECTROPHORESIS ANALYSIS IN CHRONIC KIDNEY DISEASE WITH AND WITHOUT DIABETES MELLITUS

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INTRODUCTION AND AIMS:

Renal biopsy is not commonly performed in Type 2 Diabetes Mellitus (T2DM) patients with CKD (CKD+T2DM) compared to CKD patients without DM (CKD-T2DM). Studies have shown the incidence of biopsy proven isolated non-diabetic renal disease (NDRD) in T2DM ranged from 19.4-64.0%. Dysproteinaemia could be part of the pathology for NDRD. Hence, we investigated the prevalence of NDRD and renal outcome in CKD+T2DM and CKD-T2DM patients.

METHODS:

Using electronic medical records, we collected clinical history, laboratory investigation RESULTS: including bloods, urine, renal biopsy and bone marrow biopsy (BMAT) reports for patients who had serum protein electrophoresis (SPEP) at University Malaya Medical Centre from year 2018 to 2020.

RESULTS:

Six-hundred-and-seventy-eight cases with renal disease were analysed. Baseline characteristics of the index-cases showed median age of 67.0 years (IQR 57-75), 41.9% Malay, 51.9% female with DM median duration of 12 years (IQR 5-20). Out of 678 cases, 599 (88.3%) had CKD and 79 (11.7%) had AKI. Among the CKD patients, 390 (65.1%) had diabetes and 209 (34.9%) were non-diabetes. Of the 678 index cases, 105 (15.5%) have SPEP+ve and 84 (12.4%) had CKD. SPEP+ve was found higher in CKD+T2DM (n=46, 54.8%) compared to CKD-T2DM population (n=38, 45.2%). Paradoxically, SPEP+ve was observed more than expected in CKD-T2DM (18.1%) compared CKD+T2DM (11.8%); Pearson-Chi-Square showed $p < 0.05$, the association was insignificant, Cramer's V 0.088 ($p < 0.05$).

CKD+T2DM recorded more dysproteinaemia if taking into account of BMAT reports but statistically insignificant ($p = 0.18$), Cramer's V 0.12 ($p = 0.18$). Of the 678 cases, 90 underwent renal biopsy and 32 (35.6%) were CKD+T2DM. The renal biopsy of CKD+T2DM showed 21 (65.6%) diabetic

nephropathy and staggering 11 (34.4%) NDRD, $p < 0.01$; Cramer's V 0.67 ($p < 0.01$). CKD+T2DM with SPEP+ve observed more initiation and dependence on haemodialysis, however it was statistically insignificant and showed weak association.

CONCLUSIONS:

CKD+T2DM showed significant isolated NDRD and should be offered renal biopsy with SPEP and BMAT in selected cases.

Category: Medical

Session: Oral + e-Poster

Topic: Basic Science

Abstract ID: 32-28



SURVIVING MULTIPLE EPISODES OF RELAPSING-PERITONITIS WITH THE SAME CATHETER IN CAPD-HIV PATIENTS– THE CHALLENGES FROM WITHIN A CASE REPORT AND LITERATURE REVIEW

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INTRODUCTION AND AIMS:

Hemodialysis in HIV-infected patients with end-stage kidney disease (ESKD) must be done in isolation with separate machines and equipment. In Malaysia, these isolation facilities and dedicated equipment are remarkably scarce. Peritoneal dialysis (PD) is the better option for this population in our local setting; thus, keeping them as long as possible with this modality imposed significant challenges.

METHODS:

Case Report

RESULTS:

We present a case of multiple episodes of relapsing-peritonitis (nine times) with same catheter within one year in a CAPD-HIV patient. A 61-year-old gentleman with HIV (normal CD4 count on HAART) was put on self-care CAPD after his ESKD diagnosis. He developed his first peritonitis episode seven months later, and coagulase-negative staphylococcus was cultured. 3-weeks of intraperitoneal Cefazolin was commenced with excellent response. He presented a month later with similar complaints and had Methicillin-resistant coagulase-negative staphylococci (MRCONS) peritonitis with excellent response to an appropriate course of intraperitoneal vancomycin. Unfortunately, over ten months, he developed seven other episodes of relapsing-peritonitis with the same organism which swiftly responded to vancomycin. With difficulty in securing hemodialysis slot in HIV center along with speedy response to treatment, we salvaged the catheter as long as possible. On the ninth episode of MRCONS peritonitis, we decided to perform simultaneous removal and reinsertion of PD catheter exchange using guidewire while on intravenous antibiotic. He was started on low-volume intermittent PD three days post-procedure, avoiding conversion to

hemodialysis. He resumed CAPD after 21 days with no further episodes of peritonitis.

CONCLUSIONS:

Although ISPD recommends removing PD catheters in refractory/relapsing PD peritonitis, in unique circumstances, peritonitis can be treated aggressively with correct antibiotics, particularly in cases which the catheter needs to be salvaged. Simultaneous catheter removal and replacement during infectious complications spares the patient temporary vascular access, a shift to hemodialysis, and second surgery to insert new catheter.

Category: Medical

Session: e-Poster

Topic: *Peritoneal Dialysis*

Abstract ID: 24-29



WHY IS MY CATHETER INSIDE THE LEFT HEART?-PERSISTENT LEFT SUPERIOR VENA CAVA: A POTENTIAL SITE FOR HEMODIALYSIS CATHETERIZATION

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INTRODUCTION AND AIMS:

Persistent left superior vena cava (PLSVC) RESULTS: from left anterior cardinal vein fails to regress during embryological development. Although PLSVC is usually asymptomatic, the functionality of hemodialysis catheter within PLSVC and associated post catheterization complications remain uncertain. We report a case of uncomplicated catheterization through PLSVC with good catheter function.

METHODS:

A 56 year-old man with diabetes mellitus, hypertension and End stage Renal Disease (ESRD) admitted for recurrent left brachiocephalic arteriovenous fistula stenosis. Unfortunately he had no suitable vein for creation of new arteriovenous fistula. Ultrasonography revealed small size right internal jugular vein (IJV). Hence, the non-tunneled hemodialysis catheter was inserted through left IJV under real-time ultrasound guidance to continue dialysis support while awaiting his decision on peritoneal dialysis (PD). The procedure was uneventful but chest X-ray showed unusual downward course of catheter into left mediastinum. An urgent computed tomography angiography (CTA) of central veins confirmed PLSVC with tip of catheter inside coronary sinus draining into right atrium. Echocardiography showed dilated coronary sinus with no cardiac defect. The catheter was pulled out 2cm due to concern of arrhythmia as the catheter tip is within coronary sinus. Patient subsequently underwent hemodialysis without complications using the catheter for one month until CAPD was established.

RESULTS:

PLSVC is a rare congenital venous malformation. While PLSVC is associated with congenital heart and great vessel anomaly, serious complications such as arrhythmia, embolization, angina and cardiac arrest have been reported. The catheterization of PLSVC appears to be safe provided it

has large calibre vessel and drains into right atrium as illustrated in our patient.

CONCLUSIONS:

Our case highlights that adequate calibre PLSVC with right atrial drainage can be considered as possible site for temporary dialysis access after excluding concomitant cardiac defect. However hemodialysis catheter should be removed promptly if other alternatives are available because long term safety remains unknown.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 34-30



PREVALENCE OF ACUTE KIDNEY INJURY AMONG CORONAVIRUS DISEASE 2019 (COVID-19) PATIENTS: A SINGLE TERTIARY CENTRE EXPERIENCE

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INTRODUCTION AND AIMS:

In coronavirus disease 2019 (COVID-19), acute kidney injury (AKI) can be another serious complication apart from respiratory failure. There are reports of higher mortality rate in COVID-19 cases complicated with AKI. However, the data on the incidence of AKI in COVID-19 is scarce and varies between different countries. We hope to illustrate the prevalence and risk factors of AKI in the Malaysian cohort of COVID-19 infection.

METHODS:

In this retrospective, observational, single-centre study, we collected data from the Electronic Medical Record (EMR) for all admitted cases of confirmed COVID-19 aged 18 years above from March 2020 to March 2021. This included demographic information, co-morbidities, and laboratory values. We then determined the occurrence of AKI and its outcomes.

RESULTS:

The mean age of the patients was 45.22 ± 18.36 years. Malay, Chinese and Indian accounted for 61.9%, 16.7% and 15.5% of the subjects respectively. From the total of 522 patients admitted for COVID-19, the incidence of AKI was 11.9% (62 patients). Among the patients with AKI, 11.3% (7 patients) required renal replacement therapy (RRT). Mortality was significantly higher in patients with AKI (22.6%) compared to those without AKI (0.2%). Risk factors to develop AKI included older age, higher CRP level, oxygen supplementation and the presence of cardiovascular disease, chronic kidney disease, hypertension, diabetes mellitus and liver disease.

CONCLUSIONS:

AKI in COVID-19 infections was common in our centre and conferred a significant risk for mortality and RRT.

Category: Medical

Session: e-Poster

Topic: COVID-19

Abstract ID: 35-31



EMBEDDED TUNNELED CUFFED CATHETER IN HEMODIALYSIS: A CASE SERIES

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INTRODUCTION AND AIMS:

In recent years, tunneled cuffed catheters (TCC) have played an essential role in providing access for dialysis patients with a history of difficult vascular access. However, long-standing TCC is often associated with complications such as infection, calcification, and catheter embedment, which can be life-threatening to patients.

METHODS:

We report three cases of embedded TCC and their outcomes.

RESULTS:

We describe three patients with end-stage kidney disease (ESKD) on hemodialysis for ten years with a history of multiple failed fistulas. They were on TCC for four years and referred to us for catheter exchange, given poor blood flow. Unfortunately, their exchange was unsuccessful, and the catheters could not be retracted. Imaging with a computer tomography (CT) thorax revealed embedded catheters, and subsequent venogram demonstrated stenosed luminal access for percutaneous intervention. All three patients were referred to the Cardiothoracic (CTC) team for catheter removal, however only two patients were removed successfully, and the other patient was treated conservatively as the catheter was found to be embedded near the heart. Intraoperatively noted there were severe fibrin adhesions at the internal jugular vein entry point and part of the catheter implanted into the vessel with streaks of calcification. All three patients remained well after the intervention, and their mode of renal replacement therapy (RRT) was switched to peritoneal dialysis.

CONCLUSIONS:

Permanent access is always a challenge in chronic hemodialysis. Catheters are essentially an intravascular foreign body that induces continuous endothelial inflammation, which leads to thrombus formation and eventually organizes into a fibrinous sheath around the

catheter. Understanding the perils associated with TCC, treating nephrologists should always consider an alternative RRT in such patients as a measure to limit prolonged use of TCC. This mandates an improvement in our current clinical practice as this is paramount in preventing future TCC related complications.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 36-32



VASCULAR ACCESS OUTSOURCE PROGRAM – RELIABILITY OF CLINICAL ASSESSMENT AND OUTCOME

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INTRODUCTION AND AIMS:

Arteriovenous fistula (AVF) is the preferred vascular access for effective haemodialysis. KDOQI guideline recommend the use of ultrasound mapping for all patients before fistula creation but this is not frequently practiced due to limited resources. We wish to assess the accuracy of clinical assessment in identifying suitable vessels for AVF creation.

METHODS:

This is a single centre, prospective study of a series of patients who were recruited into our AVF outsource programme that was created by Ministry of Health. This program involved non Covid-19 CKD 5 or new ESKD patients that have opted for haemodialysis. Those assessed by our specialists in a specially created outsourcing clinic that deemed suitable for access creation will be outsourced to the private institutions. Clinician assessment of suitability of vessel and the outcome of AVF creations at 3 months were captured and analysed.

RESULTS:

A total 147 patients were identified, reviewed and outsourced, with the mean age of 54year-old (Female n: 53). Out of these, 23 patients did not have access created (1 passed away, 7 needed complex grafts, 13 had small vessels, 2 needed two stages surgeries). Of the remaining 124 patients, 2 received AVGs and 122 received AVFs. From the initial vascular review, concordance for the vascular access creation suitability was 91.1%. Subsequently, concordance for vascular access that was successfully created was 84.3% with site of creation agreement at 61%. 9 patients (7.2%) have primary failure. Another 2 patients have AVF thrombosis after 2 to 4 cannulations. Additionally, 5 passed away before maturations. 101 patients (81.4%) have a functional fistula at 3 months.

CONCLUSIONS:

A careful clinician assessment of a patient's vascular access provides a high level of accuracy as to successfulness of the vascular creation. Those who failed assessment should be counselled for other modalities of dialysis.

Category: Medical

Session: Oral + e-Poster

Topic: Hemodialysis

Abstract ID: 37-33



IMPACT OF COVID-19 PANDEMIC ON PATIENT LIFE-PLAN CHOICE OF KIDNEY REPLACEMENT THERAPY

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INTRODUCTION AND AIMS:

Pre-dialysis counselling forms an integral part of the management of chronic kidney disease (CKD) patients. It can guide the choice of the dialysis modality best tailored to meet the needs of the patient. In the era of COVID-19 pandemic, the choice of kidney replacement therapy (KRT) may be altered due to various medical, financial and social factors. Hence, we assess the impact of COVID-19 pandemic on patients' life-plan.

METHODS:

This is a retrospective single centre cohort study, all patients who attended pre-dialysis counselling from 1st Jan 2019 to 31st Dec 2020 were included. They are further divided into two longitudinal cohorts: pre COVID-19 era (2019 cohort) versus the COVID-19 era (2020 cohort).

RESULTS:

In 2019 and 2020, a total of 272 patients (Female n: 143) and 168 patients (Female n: 82) attended the clinic respectively. The mean ages were 57 and 60-years-old, 75% and 80% have diabetic as their primary disease. The mean GFR recorded was around 15ml/min for both years. In the pre COVID-19 group, the KRT outcomes were: haemodialysis 44.8%, peritoneal dialysis 27.5% (CAPD 62.6%, APD 37.4%), transplant 2.5%, conservative 5.5% and remained undecided 2.2%. In the COVID-19 era group, the KRT outcomes were: haemodialysis 36.9%, peritoneal dialysis 21.4% (CAPD 58.3%, APD 41.7%), transplant 3.6%, conservative 8.3%, remained undecided 12.5%, defaulter 7%, deceased 1.2% and stable CKD not required KRT 9.1%.

CONCLUSIONS:

During the Covid-19 pandemic, 39% fewer patients attended the counselling clinic. Notably there is a reduction of 6% and 8 % of patients who opted for PD and HD. 7% of the patients defaulted further appointments. Those who remained undecided or chose conservative treatment rose by 10% and 3% year-to-year. In this time of public health emergency, extra effort is warranted to look after this high-risk population.

Category: Medical

Session: Oral + e-Poster

Topic: COVID-19

Abstract ID: 37-34



PERITONEAL DIALYSIS-ASSOCIATED NONTUBERCULOUS MYCOBACTERIUM PERITONITIS

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INTRODUCTION AND AIMS:

Peritoneal dialysis-associated peritonitis (PD-peritonitis) due to nontuberculous mycobacterium (NTM) such as *Mycobacterium abscessus* (*M. abscessus*) and *Mycobacterium fortuitum* (*M. fortuitum*) are uncommon. It can present in similar pattern as bacterial PD-peritonitis. NTM PD-peritonitis is one of the 'culture-negative' peritonitis which may require multiple antibiotic combination therapy and PD catheter removal. Its optimal treatment is yet to be established.

METHODS:

Retrospective data collection

RESULTS:

We report three cases of PD-peritonitis caused by *M. abscessus* and one case caused by *M. fortuitum*. Two cases of *M. abscessus* were tunnel-tract infection with peritonitis and one of them was on automated PD (APD). All patients were initiated on PD <6 months and effluent cultures were negative at admission. They received empirical antibacterial therapy before a diagnosis of NTM peritonitis but symptoms of infection were not resolved. Consequently, all patients had PD catheter removal, conversion to haemodialysis and 8-month multiple antibiotic combination therapy (amikacin, ofloxacin, clarithromycin ± doxycycline).

CONCLUSIONS:

Multiple antibiotic combination therapy with PD catheter removal may be effective for the treatment of NTM PD-peritonitis which generally has poor prognosis. Diagnosis of NTM PD-peritonitis should be considered in culture-negative peritonitis and/or refractory to empirical antibiotic therapy.

Category: Medical

Session: e-Poster

Topic: Peritoneal Dialysis

Abstract ID: 39-35



RITUXIMAB THERAPY IN STEROID SENSITIVE NEPHROTIC SYNDROME: PAEDIATRIC EXPERIENCED

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INTRODUCTION AND AIMS:

Childhood Nephrotic syndrome is associated with multiple relapses. Main therapy in nephrotic syndrome is using oral corticosteroid therapy. Use of steroid sparing agents such as Rituximab ameliorate steroid toxicity. Rituximab; a monoclonal antibody against the B lymphocyte CD20 marker, has been shown to be effective for complicated nephrotic syndrome. The objectives of this study is to look at reduction in frequency of relapses and prednisolone dosage after Rituximab therapy.

METHODS:

This study focus on comparison frequency of relapse and cumulative prednisolone dosage 1 year pre and post Rituximab therapy. In this retrospective observational study, 9 patients with steroid sensitive nephrotic syndrome under 18 years old that received Rituximab therapy in Institute Paediatric Hospital Kuala Lumpur. Post Rituximab therapy, patients were monitored for any immediate side effect, infection and relapses. Data were analysed using SPSS.

RESULTS:

Among the 9 patients, 7 were boys. Median age upon diagnosis was 3.42 years old and median age upon received Rituximab was 12.2 years old. Rituximab was given as third line agent in 3 patients and fourth line therapy in the remaining 6 patients. Disease duration prior to Rituximab therapy range from 2.3 years to 16.2 years. Cyclophosphamide, Levamisole, Cyclosporin, Mycophenolate mofetil and Tacrolimus are among other agents patients received. Median number of relapses decreased from 4 to 1 in comparison between 1 year pre and post Rituximab therapy (p value 0.008). 3 patients had relapse free 1 year post Rituximab therapy. Median prednisolone dosage also reduced significantly from 20.8mg/m²/day to 7.1mg/m²/day in pre and post Rituximab respectively (p value 0.007). Median duration of relapse free

post Rituximab was 8.5months. Only 1 patient developed serum sickness post Rituximab and none had infection.

CONCLUSIONS:

In conclusion, Rituximab have positive effects on treatment outcome in reducing the relapses frequency and prednisolone dosage.

Category: Medical

Session: e-Poster

Topic: *Paediatric Nephrology*

Abstract ID: 21-36



FLAVOBACTERIUM MENINGOSEPTICUM/ELIZABETHKINGIA MENINGOSEPTICUM PERITONITIS: A CASE REPORT.

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INTRODUCTION AND AIMS:

Flavobacterium meningosepticum is an uncommon nosocomial pathogen that is gradually emerging. It is a multidrug resistant, non-fermentative gram-negative bacillus that is highly adaptable to various environments. We report here a case of Flavobacterium meningosepticum/Elizabethkingia meningosepticum peritonitis in a patient post Tenckhoff catheter insertion in our center.

METHODS:

Case report

RESULTS:

A 71-year-old gentleman with multiple comorbidities required conversion from haemodialysis to peritoneal dialysis after developing hematoma post internal jugular catheter insertion. He had an eventful post-operative period with two revisions done to the catheter due to poor flow. After the second revision, he developed symptoms of peritonitis demonstrated by fever and cloudy peritoneal fluid. His culture revealed Flavobacterium meningosepticum sensitive to ciprofloxacin, trimethoprim – sulfamethoxazole and rifampicin. He was started on ciprofloxacin monotherapy with addition of rifampicin. Though initially he demonstrated response with reduction of CRP, this response was not sustained. After three weeks of antibiotics, he did not achieve clearance and required catheter removal. Due to his multiple comorbidities, conservative approach was decided as the long-term plan.

CONCLUSIONS:

We have demonstrated a case of E. meningosepticum peritonitis in a patient with end stage renal disease who presented post operatively and required removal of catheter for elimination of infection despite usage of combination therapy. This multidrug resistant emerging nosocomial pathogen needs more surveillance studies to elucidate the local incidence and prevalence.

Category: Medical

Session: e-Poster

Topic: Peritoneal Dialysis

Abstract ID: 40-37



ERTAPENEM INDUCED NEUROTOXICITY IN END STAGE RENAL DISEASE PATIENT ON INTERMITTENT HAEMODIALYSIS: A CASE REPORT.

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INTRODUCTION AND AIMS:

Ertapenem induced neurotoxicity is an unusual side effect, with seizure being the most reported. Renal impairment patients were particularly at risk because ertapenem was mainly renally excreted hence renal adjusted dose was recommended. We reported a case of a CKD5 on regular HD who developed hallucinations on a recommended dose of ertapenem.

METHODS:

Case report

RESULTS:

A 52-year-old gentleman with underlying ESRD on regular haemodialysis (HD) presented with 3 days history of fever and chills and rigors during dialysis. normal cognitive baseline and denies any pre-existing psychiatry illness. Enterobacter Cloacae Group 1 Beta Lactamase (G1BL) was obtained from central and peripheral blood culture. He was commenced on Ertapenem 500 mg OD. On day 13 of IV ertapenem, he complained of visual and auditory hallucinations. On examination, he was not orientated, no signs of meningism, no neurological deficit and other review of system was unremarkable. Initial investigations revealed WBC $7.96 \times 10^9/L$, Hb 7.8 g/dl, Platelet $471 \times 10^3/uL$, Urea 16.4mmol/L, Creatinine 844 umol/L, Sodium 140 mmol/L, Potassium 4.2 mmol/L, C-Reactive protein 56 mg/L. Computed tomography of the brain was normal. After 10 days of discontinuation, he had complete resolution of his symptoms. The timely resolution after ertapenem discontinuation makes ertapenem-induced encephalopathy the most likely explanation for this patient's course.

Ertapenem has high lipophilicity, and its half-life was significantly increased in CKD patients, especially in low eGFR. The current approved ertapenem dosing guidelines for renal impairment patients were not clinically studied.

Patient factors such as older age, low albumin and obesity have been associated with antibiotic treatment failure.

CONCLUSIONS:

Increased awareness, prompt diagnosis is crucial to avoid unnecessary investigations and potential appalling complications. Importantly, the renal dosing in patients of CKD 5-D need to be studied clinically along with pharmacokinetic study to ensure the antibiotic safety.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 40-38



DEMOGRAPHIC CHARACTERISTICS AND OUTCOMES OF PERITONEAL DIALYSIS PATIENTS IN KAJANG HOSPITAL, MALAYSIA.

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INTRODUCTION AND AIMS:

The purpose of this study was to analyze the demographic characteristics, evaluate the clinical outcomes and risk factors affecting mortality in peritoneal dialysis patients in a single center from January 2018 to December 2020.

METHODS:

This is a retrospective study of all peritoneal dialysis patients recruited from January 2018 until December 2020 in Kajang Hospital Nephrology Unit. Their demographic data and blood investigations were retrieved from their case notes. Mortality data was also collected along with technique survival. Data was then computed into Excel and was analyzed using SPSS version 25.0. A P value of less than 0.05 was taken as significant.

RESULTS:

A total of 59 patients were included in our cohort, of whom patients were enrolled, 61% were male and 71% from Malay ethnic (71%). The mean age of our PD was 51.3 ± 14.2 years. Diabetes Mellitus was the most common cause of ESRD (68%). Estimation of patient survival by Kaplan-Meier was 85.2, 60.9%, 55.4%, and 27.7%, at 1, 2, 3, and 4 years, respectively. Cox proportional hazards model analysis showed significant association with hospital admission (HR: 5.074 [0.00-0.104] $p= 0.000$), low haemoglobin (HR: 0.616 [0.32-0.900] $p= 0.018$) and low albumin (HR:0.316 [0.611 – 0.87], $p = 0.000$). Estimation of technique survival by Kaplan-Meier was 78.2%, 49%, 49%, and 24.5% at 1, 2, 3, and 4 years, respectively. Cox proportional hazards model analysis showed these factors to be significant with hospital admission (HR: 2.345 [0.025 – 0.364] $p= 0.001$), diabetes mellitus (HR: 1.334 [0.072 – 0.961] $p = 0.043$), low hemoglobin (HR: 0.403 [0.500 – 0.893] $p= 0.006$) and low albumin (HR:0.117 [0.820 – 0.965], $p = 0.005$).

CONCLUSIONS:

Peritoneal patients in our center demonstrated comparable survival and technique survival compared with reports from other Asian centers.

Category: Medical

Session: e-Poster

Topic: Peritoneal Dialysis

Abstract ID: 40-39



ASSOCIATION OF INFLAMMATORY MARKERS (NLR – NEUTROPHIL TO LYMPHOCYTE RATIO AND PLR - PLATELET TO LYMPHOCYTE RATIO) WITH RAPID PROGRESSION OF DIABETIC KIDNEY DISEASE

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INTRODUCTION AND AIMS:

Diabetic kidney disease (DKD) is the most common cause of end-stage kidney disease (ESKD) worldwide. Chronic low-grade inflammation plays a causal role in the progression of insulin resistance and pathogenesis of DKD. We set to investigate the roles of NLR and PLR within subset of DKD patient who suffered from rapid kidney function decline (RKFD)

METHODS:

This is an ambispective study conducted in the nephrology clinic, Serdang Hospital. Ninety-two (n= 92) patients referred to the nephrology department were followed up for a minimum of 6 months from 2019 Dec until April 2021. Data were extracted and collected via a proforma sheet from the Hospital eHIS system. The univariate analysis was used to analyse the renal outcomes; RKFD > 10 ml/min/year and doubling of serum creatinine with inflammatory markers (NLR and PLR) and its association by using SPSS Version 22. P < 0.05 was used as a value of significance.

RESULTS:

In our study, the median decline of GFR was 0.97 (IQR: -0.17-3.17) ml/min/1.73/month and 11.71 (IQR: -2.12-38.04) ml/min/1.73/year. An increase of age (p < 0.05), race (Malay, p = 0.040), hypoalbuminemia, proteinuria, increasing of serum creatinine, eGFR, with p < 0.05, increasing neutrophil count (p=0.035) and decreasing platelet count (p = 0.003) associated with RKFD. Additionally, an increase of neutrophil count (p=0.015, OR=3.31), and low platelet count (p=0.026, OR= 0.35), NLR (p=0.001 cut off 3.0) and PLR (p=0.014, cut off 120) showed significant associations with doubling of serum creatinine.

CONCLUSIONS:

Our study showed that elevated values of inflammatory markers, namely NLR (more than 3) and PLR (more than 120) are adversely associated with rapid decline of kidney function in DKD. Since both tests are inexpensive and readily available in health facilities, their usage can further aid the clinicians in the daily management of DKD.

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 31-40



CORRELATION OF HISTOPATHOLOGICAL FINDINGS IN DIABETIC KIDNEY DISEASE PATIENTS WITH RAPID DECLINE OF KIDNEY FUNCTION

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INTRODUCTION AND AIMS:

Diabetic kidney disease typically progresses over decades; however, certain diabetes patients display phenotypic features of rapid kidney function decline, which unfortunately may lead to ESKD within months. While every effort is made to exclude non-DKD nephropathies, an accurate assessment can only be achieved by renal histological analysis. Hence, renal biopsy is indicated for patients with diabetes under the suspicion of the presence of con-current nephropathies and for those who experienced rapid progression of renal decline (RKFD). Therefore, this study aims to identify the renal histological changes in DKD patients who have RKFD.

METHODS:

This is a prospective study conducted in our clinic. Ninety-two patients (renal biopsy n = 23 vs non-renal biopsy n=69) were followed up for a minimum of 6 months from 2019 Dec until April 2021. The chi-square and T-test were used to analyse the outcomes. Those with RKFD (GFR decreased more than 10 ml/min/year) will be advised for renal biopsy.

RESULTS:

8.7% of the DKD patients admitted to have supplement or nephrotoxic agent consumption. The mean age was 60±14 year-old with BMI 29±5. The GFR decline for those who underwent biopsy was 46±27 ml/min. The renal histopathological findings showed: 91.3% diabetic nephropathy (Tervaert Class III-IV), 56.5% acute interstitial nephritis, 91.3% acute/chronic tubulointerstitial nephritis, 52.2% co-existing ATN, 1.1% IgA nephropathy, 2.2% FSGS and 2.2% membranous nephropathy. The severity of the Tervaert score has no correlation with severity of proteinuria, staging of baseline CKD or magnitude of the RKFD.

CONCLUSIONS:

Apart from possessing more advance Tervaert scores, the majority of the renal tissues obtained have strong evidence of concurrent renal pathologies, tubulointerstitial disease and glomerulonephritis that may or may not be related to DKD. Further study is urgently needed to investigate the influence and mechanism of these ongoing insults that could further hasten the rapid deterioration of kidney function.

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 31-41



OUTCOME OF COVID -19 IN DIALYSIS PATIENTS IN KELANTAN

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INTRODUCTION AND AIMS:

Coronavirus disease 2019 (COVID-19) outbreak had occurred since December 2019 and rapidly spread worldwide including Malaysia. Chronic Kidney Disease and kidney failure are substantial comorbidities that are associated with untoward outcomes in patients with COVID-19. Kidney failure is an independent risk factor for severe COVID-19 disease presentation and mortality after accounting coexisting comorbidities. Therefore, the purpose of this cross sectional analysis is to study outcome of COVID-19 patients on dialysis in Kelantan that will give additional insight for healthcare providers in managing COVID-19.

METHODS:

This study is a retrospective cross-sectional study. The data collected from 1st April 2020 till 15th April 2021 via patient's record during admission. This study assessed the outcome of all patients with confirmed COVID-19 that underwent dialysis during admission using performa. The data analysis was done using SPSS version 25.0. RESULTS: shown via descriptive and categorical data.

RESULTS:

In Kelantan, a total of 3143 patients were admitted for COVID-19 from 1st April 2020 till 15th April 2021. There were 48 (1.5%) patients requiring dialysis during COVID-19 admission. Their demographic data, comorbidities, length of hospital stay, length of Intensive Care Unit stay, and discharge or death were collected. All are Malays, mean age was 59.5 years old, 22 (45.8%) male patients, 26 (54.2%) female patients. Among 48 patients on dialysis, 33(68.8%) patients were End Stage Renal Disease and 15 (31.25%) patients were Acute Kidney Injury. Majority of them had hypertension 95.8%. The mean severity of COVID-19 category was Category 4. Mean total length of hospital stay was 13 days. There were 26 (54.2%) patients on dialysis requiring admission to Intensive Care Unit (ICU); 14 (53.8%) were ESRD and 12 (46.2%) were AKI. There were 10 (30.0%)

ESRD and 8 (53.3%) AKI patients died due to severe COVID-19 infection.

CONCLUSIONS:

COVID-19 infection carries high mortality especially among AKI and ESRD patients.

Category: Medical

Session: e-Poster

Topic: COVID-19

Abstract ID: 42-42



IS METABOLIC-DYSFUNCTION-ASSOCIATED FATTY LIVER DISEASE (MAFLD) OR ADVANCED LIVER FIBROSIS ASSOCIATED WITH ERYTHROPOIETIN STIMULATING AGENT (ESA) HYPORESPONSIVENESS AMONG HEMODIALYSIS PATIENTS?

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INTRODUCTION AND AIMS:

Background: Up to 10% of hemodialysis patients have suboptimal response to erythropoietin stimulating agent (ESA).

Aim: To determine if MAFLD or advanced liver fibrosis is associated with ESA hyporesponsiveness in hemodialysis patients.

METHODS:

A cross-sectional study of hemodialysis patients from 10 hemodialysis centers. FibroTouch examination was performed on all patients. Fatty liver and advanced liver fibrosis were diagnosed based on ultrasound attenuation parameter ≥ 248 dB/m and liver stiffness measurement ≥ 10 kPa, respectively. Blood-based biomarkers, fatty liver index (FLI) and fibrosis-4 (FIB-4) index, were also used. Erythropoietin resistance index (ERI) was used to measure the responsiveness to ESA. Patients in the highest tertile of ERI were considered as having ESA hyporesponsiveness.

RESULTS:

A total of 379 hemodialysis patients on ESA were enrolled into this study. Prevalence of MAFLD and advanced liver fibrosis was 41.4% and 25.3%, respectively. MAFLD was significantly less common and both UAP and FLI were significantly lower in ESA hyporesponsive patients. FIB-4 index, but not LSM or percentage of patients with advanced liver fibrosis, was significantly higher in ESA hyporesponsive patients. On multivariate analysis, female gender (aOR 3.430, 95%CI 1.963-5.995, $p < 0.001$), normal waist circumference (aOR 2.379, 95%CI 1.273-4.446, $p = 0.007$), dialysis duration ≥ 50 months (aOR 1.739, 95%CI 1.047-2.887, $p = 0.033$), low platelet (aOR 2.517, 95%CI 1.262-5.021,

$p = 0.009$) and low serum iron (aOR 3.997, 95%CI 2.028-7.880, $p < 0.001$) were found to be independent factors associated with ESA hyporesponsiveness. Neither MAFLD nor advanced liver fibrosis was independently associated with ESA hyporesponsiveness.

CONCLUSIONS:

The prevalence of MAFLD and advanced liver fibrosis was found to be high, but neither was independently associated with ESA hyporesponsiveness in hemodialysis patients.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 43-43



NEPHROLOGY CLUSTER, HOSPITAL PASIR MAS: A SWOT ANALYSIS

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INTRODUCTION AND AIMS:

Cluster Hospital was introduced by MOH in 2012, all nearby government hospitals share and expand their medical resources, services and expertise. Kelantan State Nephrology Services had been included in Northern Kelantan Cluster Hospital Project. Hospital Raja Perempuan Zainab II (HRPZ II) as lead hospital and Hospital Pasir Mas as non lead hospital starting 1st Jan 2018. Due to COVID-19 outbreak, Nephrology Services had been transferred to Hospital Pasir Mas with full In-Patient Services, Acute Hemodialysis Services and Nephrology procedures since 30th December 2020.

METHODS:

We did a SWOT analysis, identifying the important Internal factor comprises of strength and weakness and external factors consist of opportunities and threat. A series of interviews, brainstorming and discussions with respective managers were done to determine these factors

RESULTS:

Among the Strengths identified is better services. There are 2 dedicated Nephrology wards with 58 beds, 44 paramedics, 13 Medical officers and 2 Specialists including 4 HD machines for acute dialysis. The outpatient services include Nephrology Clinic, CAPD and HD unit. Few weaknesses identified include the distance of 25km from HRPZII and the need for dedicated transportation services. Therefore sharing ambulance services had to be done. Transportation risk consent and relative escort are of concern. Opportunities identified are improvement in quality of public healthcare services, increase patient's trust and satisfaction, better human resource management and provision of training programs to the district hospitals paramedics and doctors especially nephrology procedures. Total Nephrology procedures in January was 78, 104 in February and 145 in March 2021. In terms of threats, there are shortage of human resources with staff nurse to patient

ratio 1:8 and untrained staff due to high turnover among paramedics potentially affecting the quality of management.

CONCLUSIONS:

Nephrology Cluster services in Hospital Pasir Mas is expanding towards Nephrology Excellent Centre in 5 years time.

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 42-44



INCIDENCE OF UNPREPARED RENAL REPLACEMENT THERAPY INITIATION IN A TERTIARY HOSPITAL

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INTRODUCTION AND AIMS:

The number of End stage kidney disease (ESKD) patients in Malaysia are expected to increase at an alarming rate and there are a large number of patients who initiate renal replacement therapy (RRT) in an unprepared manner. This study is aimed to analyze the incidence and clinical profile of newly diagnosed ESKD patients initiating RRT in a prepared and unprepared manner in a tertiary hospital.

METHODS:

A prospective, observational, single-centre study involving Hospital Melaka conducted from December 2018 to May 2019. A total of 79 newly established ESKD patients requiring RRT were identified. A structured, validated questionnaire was used to collect the demographic data, duration of hospitalization and complications from unprepared initiation of RRT

RESULTS:

There were 79 newly diagnosed ESKD patients identified during the period, 33 (41.8%) are males with median age of 55.5 years. Diabetic kidney disease(87.2%) was the main cause of ESKD in this cohort. Seventy eight patients initiated RRT as in-patient hemodialysis. 51 patients (64.5%) were under Nephrology Clinic follow-up, out of which only 26 patients (50%) had made a definite decision for long-term RRT and all patients chose hemodialysis. The remaining half under clinic follow-up either refused RRT or were undecided. Only 7 (8.7%) patients were prepared for RRT with a functional arteriovenous fistula (AVF). The remaining 72 patients (91.3%) required a central venous catheter insertion for RRT initiation. Majority of our patients (73.4%) initiated RRT with the eGFR of <5mls/min/1.73m². 67.7% patients who came unprepared required hospital admission beyond 2 weeks in comparison to 38.5% who came prepared. Common complications seen during hospitalization were catheter related blood stream

infections (22%); nosocomial infections (15%) and hemodialysis catheter dysfunction (3%).

CONCLUSIONS:

Incidence of unprepared RRT initiation was strikingly high. Evidently, this group of patients had longer hospitalization, higher complication rate and health care cost.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 17-45



A RETROSPECTIVE STUDY OF HEMODIALYSIS CATHETER RELATED HEMATOMA: DESCRIPTIVE ANALYSIS AND CATHETER OUTCOME

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INTRODUCTION AND AIMS:

Temporary hemodialysis (HD) catheters are increasingly used in Kelantan for acute kidney injury and bridging HD. Hematoma is a known complication. This study aims to evaluate clinical profile of patients who sustained HD catheter related hematoma and its outcomes.

METHODS:

This is a retrospective, cross sectional study done in HRPZ II and HUSM between 1st June 2020 and 30th September 2020 involving patients aged 12 years and above with temporary HD catheter inserted for hemodialysis. Relevant data was extracted from medical records and descriptive analysis was done using SPSS version 21.

RESULTS:

Total 591 temporary HD catheters were inserted for 397 patients in 2 tertiary centres over 4 months of which 46 sustained hematoma (7.8%). In the hematoma group, median age was 60.5 (IQR 44.7-65), 25 (54.3%) had end stage kidney disease, 16 (34.8%) had chronic kidney disease while 5 (10.9%) had no prior kidney disease. 22 (47.8%) required urgent dialysis, 15 (32.6%) admitted electively for bridging HD while 9 (19.6%) patients had problems with pre-existing vascular access. Ultrasound was used for 31 (67.4%) insertions, similar to those without hematoma (n=341, 62.6%). Majority were mild hematomas (n=40, 87%). Diagnostic ultrasound was done in 8.7% while 4.3% had CT angiogram. 3 (6.5%) patients required ICU admission due to sequelae of hematoma and 5 (10.9%) had surgical consults. 3 (6.5%) required intervention giving an incidence of 0.5%. Catheter was removed for 21 (45.7%) patients while 10 (5.6%) still had functioning catheter at 2 weeks (p<0.001). Most catheter removal was due to malfunction (n=6, 28.6%). No deaths recorded due to hematoma.

CONCLUSIONS:

Clinical profile was comparable in both groups. Most catheters with hematoma were removed due to malfunction. The incidence of catheter hematoma requiring surgical intervention was low. Nevertheless further analysis is needed to implement strategies to mitigate risks for hematoma.

Category: Medical

Session: Oral + e-Poster

Topic: Hemodialysis

Abstract ID: 26-46



OUTCOME OF PERITONEAL DIALYSIS CATHETER USING PRE-FASCIAL TUNNELLING METHOD

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INTRODUCTION AND AIMS:

Peritoneal dialysis (PD) is considered the first-choice modality for end stage kidney disease (ESKD) in many places worldwide. A functional and reliable PD catheter is an important factor in ensuring successful and long-term PD therapy. PD catheter dysfunction remained one of the obstacles for continuation of this treatment and one of the common causes is catheter migration. We aim to evaluate the incidence of primary PD catheter dysfunction by using pre-fascia tunnelling method and comparing the 1-year outcome of new insertion and reinsertion of PD catheter.

METHODS:

This is a retrospective study involving all PD catheter insertion using laparoscopic, pre-fascial tunneling method done from 1st April 2018 till 30th November 2019. Baseline characteristics and outcome of PD catheter were recorded and analysed. Patients were followed up for 1-year from the date of catheter insertion. Diagnostic laparoscopic was performed to identify the cause of PD catheter malfunction.

RESULTS:

A total of 195 PD catheter inserted during the study period. There was no difference in basic demographic data except younger age in new insertion group comparing to reinsertion group (mean age 49.4 vs 56.3, $p=0.009$). Primary PD catheter dysfunction was 7/152 (4.6%) in new insertion group and 5/43 (11.6%) in reinsertion group ($p=0.091$). Main causes of primary PD catheter dysfunction were omental wraps and adhesions. No PD catheter migration was recorded by using this technique. Technique survival at 1-year was 92.1% for new insertion group and 88.4% for reinsertion group. Kaplan-Meier curve showed no difference in technique survival at 1-year between the groups (Log-rank test $p=0.415$).

CONCLUSIONS:

This study has proved that pre-fascia tunnelling of PD catheter can prevent catheter migration and has excellent 1-year technique survival. It is not a new concept and yet is not widely practiced due to lack of expertise.

Category: Medical

Session: e-Poster

Topic: *Peritoneal Dialysis*

Abstract ID: 44-47



MOVING PERITONEAL DIALYSIS TRAINING PROGRAM TO HOME – IS IT THE RIGHT MOVE AT PANDEMIC?

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INTRODUCTION AND AIMS:

The journey to peritoneal dialysis (PD) starts with PD catheter insertion and training program. In Malaysia, PD training module typically involves a 3-5 days in-hospital stay and minimum 140 hours spent in hospital at first 3 months into program. COVID-19 pandemic has moved part of patient care from in-hospital to home-based care especially for non-emergency encounters.

METHODS:

This is a prospective observational study. All patients in home PD training program were recruited from 30th March till 30th June 2020. Demographic and clinical data at baseline, 1-month and 3-month follow-up were collected.

RESULTS:

45 (26 male, 19 female) patients were included. Mean age was 56.4±14.1. 31(68.9%) had diabetes mellitus, 41 (91.1%) with hypertension and 13 (28.9%) with heart disease. 33 (77.8%) managed to do selfcare whereas 10(22.2%) requires assistant. 37 (82.2%) were on Continuous Ambulatory Peritoneal Dialysis and 8 (17.8%) were on Automated Peritoneal Dialysis. 19 (42.2%) achieved targeted dry weight at 1-month and 13 (28.9%) at 3-month. Hemoglobin was 8.97±1.24g/dL at baseline, 10.12±1.35g/dL at 1-month and 10.87±1.69g/dL at 3-month. Serum calcium was 2.16±0.266mmol/L at baseline, 2.18±0.42mmol/L at 1-month and 2.15±0.184mmol/L at 3-month. Serum phosphate was 2.04±0.722mmol/L at baseline, 1.70±1.06mmol/L at 1-month and 1.75±0.431mmol/L at 3-month. There were 6 episodes of peritonitis (0.04 episode per patient-year) and 11 episodes of exit site infection within 3 months upon initiation of PD. Time spent in healthcare facilities at 1-month was 39.49±108.05 hours and 91.10±144.4 hours at 3-month.

CONCLUSIONS:

Moving patient care in-hospital to home-based training is an important measure for risk reduction during pandemic. This study showed desirable short term clinical outcomes when PD training is moved to patients home with monitoring by hospital team via teleconsultation. Further analysis on larger number of patients and comparison with control group of patients with in-hospital training is needed.

Category: Medical

Session: e-Poster

Topic: *Peritoneal Dialysis*

Abstract ID: 45-48



OVERVIEW OF CATHETER RELATED BLOODSTREAM INFECTION AMONG URGENT HEMODIALYSIS PATIENTS IN DISTRICT HOSPITAL INTENSIVE CARE UNIT.

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INTRODUCTION AND AIMS:

Renal replacement therapy initiated in 15.3% of Malaysia ICU admission. Knowledge on Catheter Related Bloodstream Infection (CRBSI) among urgent hemodialysis patients at ICU improve renal critical care.

METHODS:

Retrospective study from January 2019 until December 2020 at our district center ICU. Patient aged more than 18 year old on urgent hemodialysis with temporary catheter inserted at ICU were included. Differential time to positivity between central and peripheral blood samples were considered CRBSI. Patients on antibiotics prior to CRBSI diagnosis or regular hemodialysis with permanent cuffed catheter or internal jugular catheter were excluded.

RESULTS:

A total of 156 patients were recruited of which 40 patients; 24 females and 16 males with mean age of 55 year old (SD 15) fulfilled the criteria for CRBSI. This constituted a CRBSI rate of 0.4 bacteremia per 1000 catheter days. The commonest organisms were Staphylococcus aureus of which 53% MSSA and 17.5% MRSA. This is followed by 15% Pseudomonas aeruginosa, 7.5% Chryseobacterium Indologenes, 5% Klebsiella pneumonia (ESBL) and 2.5 % Enterococcus faecium. Majority of CRBSI 85% from femoral catheter and 15% from Internal jugular catheter. Mean catheter duration of 6 days (SD 0.7) and ICU stay of 16 days (SD 12) before CRBSI developed. Mean Acute Physiology and Chronic Health Evaluation (APACHE) score of 28 (SD 15). The significant risk factors for CRBSI were diabetes mellitus OR 0.97 (95% CI 0.25-3.8 ; p 0.02), duration of ICU stay OR 1.0 (95% CI 0.9- 1.0; P 0.01), and duration of temporary dialysis catheter inserted OR 1.0 (95% CI 0.6-1.7; p 0.02). Case fatality rate for CRBSI in this study were 7.5% with MRSA as confounding factor OR 4.1 (95% CI 2.4-7.0; p 0.01).

CONCLUSIONS:

Recognising the risks and effective treatment for CRBSI reduce hospitalisation cost and improves CRBSI outcome.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 47-50



EPIDEMIOLOGY OF CRITICALLY ILL PATIENTS WITH SEVERE AKI IN UNIVERSITI KEBANGSAAN MALAYSIA MEDICAL CENTRE(UKMMC)

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INTRODUCTION AND AIMS:

Severe acute kidney injury (AKI) requiring renal replacement therapy (RRT) is a common complication in intensive care unit (ICU) patients and associated with high mortality and poor renal outcome. However, the epidemiologic data of severe AKI among critically ill patients in Southeast Asia region including Malaysia are still scarce.

METHODS:

We conducted a prospective observational study in UKMMC. Patients with severe AKI (stage 3 by KDIGO criteria) and admitted to the ICU were recruited in the study. We used electronic web-based format to record data regarding demographic, clinical, and laboratorial data.

RESULTS:

70 patients were recruited during the study period. The median age was 67 (61-71.25) year-old and 58.6% were male. Median baseline serum creatinine was 104.10 (75.95-182) $\mu\text{mol/L}$. Hypertension was the most frequent comorbidity (n=48, 68%) followed by diabetes (n=42, 60%), dyslipidaemia (n=25, 37.5%). 95.71 % patients were ventilated and 87.14% required inotropic support. The median baseline APACHE score was 35 (25-39) and mean SOFA score was 12.79 ± 4.11 . The median urine output for our subjects were 267.5mls / day. The main reason for ICU admission were sepsis (n=30,42.9%), followed by multifactorial, which has combination causation of AKI which comprised of 30%, cardiac causes about 12.9 %, then dehydration and nephrotoxic medications about 11.4% each. 97.14% patients received RRT for median time of 6 (2-12) days. Sustained low-efficiency dialysis (SLED) was the commonest initial mode of RRT (54.94%), followed by intermittent haemodialysis dialysis (41.43%) and continuous

renal replacement therapy (34.29%). Our patients required median of 6 days of RRT.

CONCLUSIONS:

The most common aetiology of severe AKI was sepsis. Majority needed RRT and the commonest initial RRT was SLED

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 33-51



LONG-TERM OUTCOME OF CRITICALLY ILL PATIENTS WITH SEVERE ACUTE KIDNEY INJURY IN UNIVERSITI KEBANGSAAN MALAYSIA MEDICAL CENTRE (UKKMC)

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INTRODUCTION AND AIMS:

Acute kidney injury (AKI) is one of the most frequent organ failures encountered among intensive care unit (ICU) patients. The incidence of long-term renal outcome and mortality related to severe AKI in Malaysia has not been well studied.

METHODS:

We conducted a prospective observational study in UKMMC. Patients with severe AKI (stage 3 by KDIGO criteria), and admitted to the ICU were recruited in the study. We used electronic web-based format to record data regarding demographic, clinical, and laboratorial data. Patients who survived and were discharged from hospitals, were followed up by phone calls every 3 months for the 1st year, and every 6 months for the 2nd year.

RESULTS:

We recruited 70 patients with severe AKI. The median of ICU stay was 8 (5.5 - 11.5) days and mean hospital stay was 19.56 ± 11.43 days. Among the patients, only 41.4% had renal recovery. The overall mortality was 45.7% with hospital mortality about 38.6%. When comparing patients' characteristics between those who survived and non-survivors, we found no differences in age, gender, comorbidity, APCAHE II score, SOFA score and primary disease. However, non-survivors had higher inotropic use (96.9%), positive fluid balance (906.75ml/day) and discharge serum creatinine (365.40 µmol/L) compared to those who survived. The choice of RRT did not confer any survival benefit among patients who had severe AKI.

CONCLUSIONS:

Our study showed that overall mortality of severe AKI was 45.7% and only 41.4% of patients had renal recovery. Higher inotropic use, positive fluid balance and discharge serum creatinine were the risk factors for mortality

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 33-52



SILICON-INDUCED GRANULOMATOUS REACTION LEADING TO HYPERCALCAEMIA AND SPECTRUM OF KIDNEY DISEASE: A CASE REPORT

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INTRODUCTION AND AIMS:

Hypercalcemia is a relatively common clinical problem with 90% of the cases caused by primary hyperparathyroidism and malignancy. Hypercalcemia due to silicon-induced granulomatous reaction is rare. We report a case of hypercalcemia secondary to silicon-induced granulomatous reaction leading to spectrum of kidney disease.

METHODS:

Case report and review of literature.

RESULTS:

A 62-year-old lady, known Hepatitis B carrier, with history of silicon oil globules injection at chin and bilateral breasts in early 2000 presented in December 2016 with pruritic, nodular skin lesions over the chin and breasts without systemic symptoms. She was treated with four injections of dexamethasone over four months before proceeded with removal of breast tissues and implants in March 2017. Histopathological examination of the breasts showed rounded vacuoles consistent with silicon associated with foreign body giant cell reaction. Later in 2018, she has recurrent admissions for symptomatic hypercalcemia, complicated by dehydration, acute kidney injury and depression requiring intravenous pamidronate and subcutaneous calcitonin. Various investigations including blood test and imaging studies were carried out to rule out common causes of hypercalcemia. There are no other causes of kidney disease identified. A diagnosis of hypercalcemia secondary to silicon-induced granulomatous reaction was made. She was treated with oral prednisolone and her serum calcium level normalized. Her renal function improved from chronic kidney disease (CKD) stage 5 to CKD stage 4 and remains at CKD stage 4 after tapered off prednisolone.

CONCLUSIONS:

Timely diagnosis and management of hypercalcemia secondary to silicon-induced granulomatous reaction is important to prevent acute and chronic renal complications. Early treatment with steroid may improve outcome.

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 49-53



ANCA ASSOCIATED VASCULITIS COMPLICATED WITH RPGN: TREATMENT APPROACH AND ITS OUTCOME

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INTRODUCTION AND AIMS:

Pauci immune glomerulonephritis is the most common cause of rapidly progressing glomerulonephritis. The 5 year survival rate with corticosteroids and cyclophosphamide is more than 80%. One year mortality risk is more than 90% without treatment.

METHODS:

A retrospective observational case study.

RESULTS:

We report a case of a 23 year old gentleman with no past medical illness who presented with joint pain, lethargy, fever and blurring of vision for 3 weeks. He was seen by the ophthalmologist and was diagnosed with anteroseptal scleritis and corneal limbus. His blood investigation revealed a deranged renal profile and urinalysis showed hematuria and proteinuria. At presentation his creatinine was at 159ummol/L which rapidly increased to 291.5ummol/L within a week. Total urinary protein excretion over 24 hours is 2.4g. Immunological markers revealed cANCA with PR3 positivity. A renal biopsy was performed which revealed pauci immune crescentic glomerulonephritis (PICGN) with more than 90% crescents. Treatment was immediately initiated with intravenous methylprednisolone 500mg od for 3 days and followed by 9 cycles of three weekly intravenous cyclophosphamide at 15mg/kg based on the latest 2020 KDIGO guidelines. He received a total of 10g of intravenous cyclophosphamide. Upon completion of treatment there was improvement in proteinuria and the renal profile stabilized. During our latest clinic review, his creatinine level was at 202.4ummol/L with 24 hour urinary protein excretion of 0.830 g. Maintenance therapy with azathioprine was initiated.

CONCLUSIONS:

Incidence of ESRD despite aggressive immunosuppressive therapy remains high in this disease. Cyclophosphamide and corticosteroids remain the choice of induction however newer agents are being studied to improve mortality and morbidity.

Category: Medical

Session: e-Poster

Topic: Glomerulonephritis

Abstract ID: 55-57



BLEEDING DOWNHILL ESOPHAGEAL VARICES, A RARE COMPLICATION OF CENTRAL VEIN STENOSIS MORE THAN JUST SKIN DEEP

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INTRODUCTION AND AIMS:

Central venous catheter(CVC) is commonly used as first vascular access for hemodialysis (HD) especially in unprepared End Stage Kidney Disease (ESKD) patients. We describe an ESKD patient with downhill varices bleed due to severe central vein stenosis following prolonged use of CVC.

METHODS:

case report

RESULTS:

A 57 years-old lady with ESKD initiated hemodialysis in October 2015 with IJV tunneled catheter while awaiting for fistula creation. She started to HD via left middle radio-cephalic fistula in May 2016 and unfortunately it got thrombosed in November 2017. Left IJC was inserted for HD till October 2018 before another left brachio-basilic fistula(BBF) was created.

In July 2019, she presented with upper extremity swelling and central venogram showed left brachio-cephalic vein (BCV) occlusion which resolved with venoplasty. In December 2020, she started to have progressive facial swelling. In January 2021, she presented with hematemesis and thrombosed left BBF. Esophagogastroduodenoscopy(OGDS) showed Grade 1 esophageal varices(entire column) with no evidence of portal gastropathy. There was no liver cirrhosis in ultrasound abdomen and fibroscan showed F3 fibrosis which is very low risk to develop varices from portal hypertension.

Central venogram showed recurrent occlusion of left BCV and superior vena cava(SVC). Her facial and upper limbs swelling resolved following venoplasty. However her central vein stenosis recurred 1 month later, requiring venoplasty despite being converted to peritoneal dialysis in January 2021.

In normal physiology, the venous system of the upper limbs and head will drain into the SVC. She developed bleeding downhill esophageal varices due to occlusion of left BCV and SVC resulting in retrograde flow of the left lateral thoracic vein which diverted downstream into the esophageal venous plexuses causing formation of downhill varices.

CONCLUSIONS:

Central vein stenosis is a known complication for CVC insertion. This case showed central vein stenosis can lead to varices bleeding.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 12-58



MUSICAL-CHAIR' (FREE-SITTING) IN DIALYSIS UNIT DURING A PANDEMIC: THE DEVIL'S ADVOCATE

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INTRODUCTION AND AIMS:

The COVID-19 infection poses a significant threat to patients on dialysis due to the risk of cross-contamination in closed environments and due to abnormalities in the adaptive and innate immune systems. The free-sitting policy like "musical-chair" has been practised by the patients pre-pandemic, where they can sit at any dialysis chair they like. During the pandemic, we observed this policy and changed it to the dedicated dialysis chair and staff per patient and evaluated the outcome.

METHODS:

A retrospective analysis was conducted in the hemodialysis unit (HDU) Hospital Serdang involving patients and health care workers (HCW) who were infected with COVID-19 or became patients under surveillance and investigation (PUS) during the third wave of pandemic (between December 2020 to February 2021). The dedicated chair policy was initiated by the end of December to control the infectivity rate. We compared the musical-chair and the dedicated-chair policy patients' outcomes.

RESULTS:

Seventy-four COVID-19 positive cases and 124 patients under surveillance were recorded in our HDU during the study period. Eighty-one percent of positive cases throughout the study are HCW. December 2020 had the highest positive cases (70%). In December, we initiated a dedicated dialysis chair policy that showed a marked reduction to 6% of positive cases in February 2021. Despite implementing this new policy, we observed an increment in PUS (60%) in January 2021, even though the positive cases decreased tremendously. Regrettably, 80.4% of the PUS were the HCWs, and surprisingly 34.8% did not adhere to standard operation procedures (SOP). This instance had lead to a 62.5% reduction in HDU staffing during the period

CONCLUSIONS:

Strict measures should be taken to reduce the risk of infection to prevent worse outcomes in this population. Dedicated-chair policy and adherence to SOP is the best preventive measure during the pandemic.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 56-59



COLLATERAL DAMAGE OF COVID 19 IN ESKD PATIENT: A CASE REPORT

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INTRODUCTION AND AIMS:

Acute Coronary Syndrome (ACS) is a condition signified where the circulatory demand of the myocardium is unmet by the coronary circulatory blood flow. Traditionally, it is associated with atherosclerosis, leading to either partial or total occlusion of the coronary vessels. However, in the wake of the COVID-19 pandemic, myocardial infarction (MI) cases are at an exponential spike, including Myocardial infarction with nonobstructive coronary arteries (MINOCA) cases. We are reporting a case of an end-stage kidney disease (ESKD) patient who is positive with COVID 19 infection presented with MI.

METHODS:

We present a case of a 46-year-old lady with ESKD due to missed glomerulonephritis, who was positive with COVID-19. She otherwise had no other known cardiac issue throughout her regular medical assessment. She presented to our Emergency Department with sudden onset loss of consciousness/ unresponsiveness and hypotension. Her GCS on presentation was 8/15, and family members were unsure of any chest pain episode before the event. Blood pressure was low, with a normal sugar level (12 mmol/L). She subsequently went asystole during triaging, requiring CPR for 25 minutes with Return of Spontaneous Circulation.

The physical examinations and cardiovascular examinations were unremarkable. The 12-lead Electrocardiogram showed a new Right Bundle Branch Block (RBBB) and ST depression over I, aVL, V5 and V6. Blood panels revealed mild hyperkalemia (5.0 mmol/L) with elevated cardiac markers (Troponin I of 183-> 460 at 0 and 3-hour presentation). Therefore, a non-ST segment myocardial infarction was suspected and attending cardiology colleagues were notified for assessment and intervention.

RESULTS:

Unfortunately, she developed another asystole episode before transferring to Cardiac Care Unit and required CPR for 25 minutes. She succumbed due to Non-ST Segment Elevation Myocardial Infarction.

CONCLUSIONS:

During the pandemic of COVID 19, high-risk patients with comorbidities presented with any cardiovascular complication required urgent attention from a physician to prevent morbidity and mortality due to COVID 19 complication.

Category: Medical

Session: e-Poster

Topic: COVID-19

Abstract ID: 56-60



A SINGLE CENTRE EXPERIENCE OF ARTERIOVENOUS FISTULA WAITING TIME AND ITS FUNCTIONALITY AFTER 6 MONTHS

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INTRODUCTION AND AIMS:

Permanent vascular access with native arteriovenous fistula (AVF) is the best for haemodialysis patients. Temporary indwelling catheters are associated with increased morbidity and mortality.

METHODS:

This is a retrospective study which included patients who had AVF creation in Hospital Serdang from 1st October 2019 to 31st December 2019. Baseline demographics and time of referral to the time of surgery were recorded. The AVF functionality after 6 months was analyzed.

RESULTS:

A total of 33 patients aged 54.91±13.17 years old were included in this study. It consists more of male (n=20, 58.8%), with majority of them Malays (n=24, 70.6%) followed by Indians (n=6, 17.6%). 79.4%(n=27) patients were hypertensive, 67.6% (n= 23) diabetics and 44.1% (n=15) cardiovascular diseases. Median waiting time from referral to fistula creation was 278 + 95.2 days. 85 % (n= 29) patients needed urgent dialysis, hence 79.4%(n=28) had IJC insertion. Six patients (17.6%) were cancelled intraoperatively due to accelerated BP or vessels deemed unsuitable. One patient passed away before fistula assessment. Fistula created were 80% BCF(n=24), 10% (n=3) BBF and RCF. These AVF were majority operated by vascular surgeons (n=24, 60.6%) and the rest by general surgeons. Approximately half (47.1%), n=16 were successfully cannulated after a median period of 48 + 27 days. However only 9 could be used up to 6 months and 7 were able to achieve Qb: 300 ml/min. In view of this, 3(8.8%) had to be converted to peritoneal dialysis and 9(26.5%) cuffed catheters. The reasons for primary fistula failure were steal syndrome or central vein occlusion.

CONCLUSIONS:

Creation of fistula does not relate to adequate delivery of dialysis for patients. Both patients' factors which include comorbidities, age, frequency of temporary catheters insertions and surgical factors that are long waiting time and insufficient operating time and staff would contribute to failure of creating a durable and functional fistula.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 57-61



CLINICAL OUTCOME OF RENAL BIOPSY PROVEN IG A NEPHROPATHY (IgAN): HISTOPATHOLOGY FINDINGS AS A PROGNOSTIC MARKER

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INTRODUCTION AND AIMS:

IgA nephropathy (IgAN) being the most common glomerulonephritis has a heterogeneous clinical course with a diversity of renal outcomes. Various factors have been identified to influence the progression of disease. Histology findings are a useful tool for prognostication of disease. This study reports HPE as a prognostic marker of IgAN patients.

METHODS:

This is a retrospective study of 89 renal biopsy proven IgAN from 2004 to 2014 at Hospital Serdang. Renal biopsies were classified using H. S. Lee's grading system for IgAN. Statistics were analyzed using SPSS Version 25.

RESULTS:

We included 89 patients aged 39 ± 9.14 years old, with equal distribution of gender. Majority were Malays, $n=73(82\%)$. A quarter were obese, $n=21(23.6\%)$. Premorbidly, 47.2% were hypertensive. Proteinuria, $n=69 (77.5\%)$, microscopic haematuria, $n=59 (66.3\%)$ and renal impairment at presentation, $n=57 (64\%)$ were the most common clinical presentations. One third ($n=34, 39.5\%$) progressed to ESKD within 25.88 ± 27.5 months and a quarter ($n=23, 28\%$) sustained rapid kidney function decline (RKFD) > 10 ml/min/1.73/m² year. Renal biopsies with \geq Grade III belonged to 32 patients (35.9%) who progressed to ESKD and 7 patients (7.86%) with RKFD. Patients presenting with oedema had a higher grading ($p=0.048$); similarly with nephrotic range proteinuria ($p=0.026$). Creatinine level was of statistical significance with HPE grading ($p= 0.001$). Patients with renal impairment at presentation had worse grading ($p=0.02$). Those with Grade III-V were significantly associated with hypertension ($p=0.000$) including SBP and Diastolic BP ($p=0.014, 0.017$). There is significant association of Lee's criteria with renal outcomes (RKFD $p = 0.022$, eGFR reduction $> 50\%$ $p= 0.024$, ESKD $p = 0.000$).

CONCLUSIONS:

Clinical severity and outcome of IgAN is in accordance to grading of histopathology criteria, which is a valuable prognostic tool to identify high-risk patients.

Category: Medical

Session: e-Poster

Topic: Glomerulonephritis

Abstract ID: 57-62



CLINICAL OUTCOME OF RENAL BIOPSY PROVEN IG A NEPHROPATHY (IgAN): PROGRESSION TO END STAGE KIDNEY DISEASE(ESKD)

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INTRODUCTION AND AIMS:

IgA nephropathy (IgAN) has a heterogeneous clinical course. It leads to progressive kidney disease with 25-30% of patients developing ESKD within 25 years. This study reports progression to ESKD in IgAN patients.

METHODS:

This is a retrospective study of 89 renal biopsy proven IgAN from 2004 to 2014 at Hospital Serdang. Progression to ESKD and its association was analysed by SPSS Version 25.

RESULTS:

This study included 89 patients aged 39 ± 9.14 years old, with equal distribution of gender. Majority were 82% Malays (n=73). A quarter were obese, n=21(23.6%). Premorbidly, 47.2% were hypertensive. Median creatinine was 260.28 ± 311.29 $\mu\text{mol/L}$ and eGFR of 73.21 ± 52.22 mL/min/1.73 m^2 . Proteinuria (n=69, 77.5%), microscopic haematuria (n=59, 66.3%) and impaired renal function n=57 (64%) were the most common clinical presentations. Approximately one third (n=34, 39.5%) progressed to ESKD within 25.88 ± 27.5 months and a quarter (n=23, 28%) who sustained RKFD > 10 $\text{ml/min/1.73 m}^2/\text{year}$. DM and hypertension are significantly associated with progression to ESKD (p=0.030, p=0.001). Similarly, those who presented with high BP with or without background of hypertension (p=0.000). Those with proteinuria were trending towards significance in progressing to ESKD (p=0.065). Impaired renal function at presentation is a strong risk factor for development of ESKD(p=0.000). Creatinine (p=0.001) and eGFR (p=0.001) were also significant. Those sustained RKFD (p=0.001) and eGFR drop > 50 % in the first year (p=0.040) lead to ESKD. Increasing grading of histopathology findings (H. S. Lee criteria) is of significance towards ESKD (p = 0.000) and RKFD((p = 0.006)

CONCLUSIONS:

Patients in this study had led to ESKD at a faster rate compared to available data. This is likely due to severe histological changes at the beginning of disease itself and perhaps a late presentation for treatment. Also contributed by other various predicted factors of DM, hypertension, and impaired renal function.

Category: Medical

Session: e-Poster

Topic: Glomerulonephritis

Abstract ID: 57-63



RETROSPECTIVE REVIEW OF CASE SERIES OF CALCIFIC UREMIC ARTERIOLOPATHY IN UNIVERSITY MALAYA MEDICAL CENTRE

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INTRODUCTION AND AIMS:

Calcific Uremic Arteriopathy (CUA) is a rare but devastating disease affecting End Stage Kidney Disease (ESKD) patients. Reported risk factors of CUA in literature include female sex, obesity, diabetes mellitus, vitamin K antagonists (VKA) and ESKD. CUA prevalence in Malaysia is unknown and has not been reported.

METHODS:

A retrospective review of confirmed cases of CUA that was admitted to University Malaya Medical Centre (UMMC) was conducted. Records from 2016 until March 2021 was reviewed to determine patients' characteristics, clinical presentation, dialysis history, laboratory parameters, treatment, and outcome.

RESULTS:

There were 5 cases of CUA over the past 5 years. 80% of them was female and 60% was Malay. Mean age was 44.8±11.5 years. Three of the patients were on peritoneal dialysis while the rest was haemodialysis. Mean dialysis vintage was 11.2±5.4 years. Only one patient was obese. None had diabetes. All presented with typical skin lesions of CUA based on Hayashi criteria. None was on VKA. One patient is on Factor Xa Inhibitor. Four patients were on calcium-based phosphate binders and iron supplements prior to diagnosis. Interestingly, one patient had cutaneous calcinosis while another had metastatic pulmonary calcifications. Blood parameters show mean calcium 2.8±0.3 mmol/L, phosphate 2.7±0.4 mmol/L, parathyroid hormone level 279.2±275.3 pmol/L, alkaline phosphatase 427.8±314.7 U/L, CaXP Product 94.1±18.5 mg²/dl². Mean kt/V was 1.6±0.4. All patients were treated with sodium thiosulphate, cinacalcet, optimization of dialysis regime, wound care and pain control. Three patients successfully underwent parathyroidectomy. Two died before parathyroidectomy could be done. The outcome of CUA in our centre was poor

with an 80% mortality rate within 6 months of diagnosis. Cause of mortality was due to sepsis.

CONCLUSIONS:

In this single centre review, we found that CUA is not uncommon and has high mortality rate. Larger multicentre studies can be conducted to evaluate overall prevalence of CUA in Malaysia.

Category: Medical

Session: e-Poster

Topic: *Mineral Bone Disease*

Abstract ID: 30-65



PREDICTORS OF HOSPITALIZATION, LENGTH OF STAY AND MORTALITY AMONG CHRONIC HAEMODIALYSIS PATIENTS IN A SATELLITE CENTRE

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INTRODUCTION AND AIMS:

Chronic haemodialysis patients have complex medical conditions that often lead to hospitalization and mortality. The aim of this study is to identify factors associated with hospitalization, length of stay and mortality among chronic haemodialysis patients.

METHODS:

This retrospective cohort study was performed in a single haemodialysis centre among 68 patients who underwent haemodialysis between the period of January 2020 to January 2021. These patients underwent regular haemodialysis for at least 60 days in the same centre. Exclusion criteria include patients who had converted to peritoneal dialysis and those with incomplete data. Baseline criteria of the patients were determined initially and their association with hospitalization, length of stay (LOS) and death were determined with Pearson's Chi-square test with Yate's correction.

RESULTS:

Thirty-one patients were hospitalized and eight died (mortality rate of 11.8%) in this study. The average LOS was 11 days. The most frequent causes of hospitalization were pneumonia, vascular access related problems and catheter related bloodstream infection. The main cause of mortality was acute coronary syndrome. Haemoglobin of <10 mg/dL ($p=0.0079$), diabetes mellitus ($p=0.005$) and serum calcium <2.2 mmol/L ($p=0.01$) were significantly associated with hospitalizations. Male ($p<0.0001$), haemoglobin <10 mg/dL ($p <0.0001$), albumin <35 mg/dL ($p = 0.015$), diabetes mellitus ($p<0.0001$), use of catheter for vascular access ($p<0.0001$), serum potassium ≤ 5 mmol/L ($p = 0.003$), dialysis vintage >5 years ($p<0.0001$) and serum calcium <2.2 mmol/L ($p<0.0001$) were associated with increased duration of hospitalization. Albumin <35 mg/dl ($p=0.009$) and low-density lipoprotein cholesterol <2.6 mmol/L ($p=0.0005$)

were associated with mortality. Age, phosphate level and Kt/V value were not associated with these outcomes.

CONCLUSIONS:

The factors associated with hospitalization, increased LOS and mortality among chronic haemodialysis patients were identified. Correction of electrolyte abnormalities and anaemia, improving nutritional status, and vascular catheter avoidance are potential modifiable risk factors that can be improved.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 61-67



ANCA-ASSOCIATED VASCULITIS(AAV): CLINICAL CHARACTERISTICS, TREATMENT AND OUTCOMES – A SINGLE-CENTRE STUDY

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INTRODUCTION AND AIMS:

ANCA-Associated Vasculitis(AAV) is associated with pauci-immune necrotizing small vessel vasculitides, and usually presents as rapidly progressive glomerulonephritis(RPGN). There is to date only one study in Malaysia that looked at AAV with MPO/PR3 positivity and the study was done more than 10 years ago.

METHODS:

All MPO/PR3 antibodies tests done at UMMC from 1st January 2020 until 31st December 2020 were collected from review of electronic medical records. Parameters such as basic demographics, clinical presentation, type of antibodies detected, dialysis history, creatinine on admission, renal biopsy findings, treatment and outcome were collected.

RESULTS:

Out of 223 tests performed, 24 revealed positive RESULTS:. There was a preponderance of MPO positivity (N=18, 75%), while 5 had positive PR3 and 1 patient had double positivity (MPO & PR3). Majority were female (63%) and 42% were older person, aged >65 years old. Clinical presentation varied but mainly included RPGN, nephrotic syndrome, AKI or CKD. Highest creatinine on admission recorded was 1660umol/L, lowest creatinine was 44umol/L with a mean of 470umol/L. Almost two-thirds of patients (71%) had creatinine of <500umol/L on presentation. More than half of the patients did not undergo renal biopsy (N=13) due to unsuitable medical conditions. Those who underwent renal biopsy (N=11), 6 had crescents, 2 no crescents and the remaining 3 showed other findings. Up to 42% of patients required renal replacement therapy at presentation. Among 16 patients who received immunosuppressants, all received either pulse intravenous steroids or oral steroids, 5 received plasma exchanges, 9 received rituximab, 3 had cyclophosphamide, and 5 recorded usage of azathioprine. In

terms of clinical outcomes, 37% were in remission, 21% developed CKD, 17% progressed to ESKD and 21% died.

CONCLUSIONS:

Locally, we observed a preponderance of MPO-AAV which is prevalent among old person with significant adverse outcomes despite use of potent immunosuppressants.

Category: Medical

Session: e-Poster

Topic: *Glomerulonephritis*

Abstract ID: 63-69



PERIOPERATIVE MANAGEMENT OF REFRACTORY HYPERCALCEMIA SECONDARY TO PARATHYROID CARCINOMA, THE ROLE OF HEMODIALYSIS

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INTRODUCTION AND AIMS:

Parathyroid carcinoma is a rare cause of hypercalcemia. Severe or acute onset hypercalcemia can lead to serious complications. Standard treatment for hypercalcemia include saline hydration, bisphosphonates, steroids, calcitonin and cinacalcet. Hemodialysis is rarely done but it is an effective treatment in refractory hypercalcemia while waiting for definite treatment for the primary condition

METHODS:

We are reporting a case of refractory hypercalcemia, its perioperative care and the utilization of hemodialysis when other treatments fail.

RESULTS:

A 17 year- old lady, presented after a trivial fall. She sustained a fracture of the right humerus and bilateral neck of femur. She had no other symptoms. Hip x ray revealed lytic lesions at the greater trochanter of the right femur. Serum Calcium was 3.75mmol/L. On further workup we discovered she had high intact parathyroid hormone level (1180 pg/ml), vitamin D deficiency and hypercalciuria . Ultrasound of the thyroid gland showed lobulated lesion in posterior right thyroid lobe. In order to optimize the serum calcium level to less than 3mmol/l for the right parathyroidectomy and right hemithyroidectomy, she was treated with adequate saline hydration, IV Zoledronate, subcutaneous calcitonin injection, IV Palmidronate. However these treatments failed. Eventually, her ECG showed short QT interval. Hemodialysis was done twice and her serum calcium finally lowered to less than 3mmol/l. Post surgery, she developed hungry bone syndrome and required almost 3 weeks of intravenous calcium infusion in addition to high doses of oral calcium and vitamin D supplement. She was discharged well.

CONCLUSIONS:

Hemodialysis is rarely needed in the treatment of hypercalcemia, however it is very useful to treat refractory hypercalcemia, especially when the calcium needs to be lowered urgently. Risk and benefit should be discussed with the patient. Hemodialysis catheter should be removed once the calcium is well controlled

Category: Medical

Session: e-Poster

Topic: *Mineral Bone Disease*

Abstract ID: 64-70



LOBULATED KIDNEYS- A MIMICKER OF RENAL TUMOUR

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INTRODUCTION AND AIMS:

Persistent fetal lobulation of kidneys is a rare anatomic variant which can mimic renal tumour. It is diagnosed in 4% of children and 10% of the adult population. Lobulation is characterized on sonography by the presence of renal surface indentations that overlie the space between the pyramids, caused by incomplete fusion of the kidney lobules at the end of fetal period.

METHODS:

N/A

RESULTS:

A 34 years old man was diagnosed with hypertension in 2019 during veteran medical checkup which was controlled with amlodipine, perindopril and metoprolol. However, investigations noted persistent impaired kidney function with serum creatinine 110 $\mu\text{mol/L}$, urine analysis showed significant proteinuria with urine protein creatinine index of 134mg/mmol, without microscopic hematuria. Antinuclear antibody(ANA) was positive (1:80, speckled pattern) but became negative when repeated, with normal C3 and C4 levels. His Hepatitis B, C and HIV serology were negative.

He has neither symptoms suggestive of connective tissue disease nor constitutional symptoms. There was no family history of kidney disease or malignancy.

Patient was planned for renal biopsy but noted multiple renal masses on ultrasonography, suspicious of tumours. Hence we proceeded with CT Urography which revealed irregular kidney contour with lobulations, otherwise no focal lesions noted.

We proceeded with a biopsy on the left kidney and the histopathology showed focal global glomerulosclerosis with mild chronic tubulointerstitial changes. His proteinuria reduced to 66mg/mmol after optimization of renin-angiotensin-aldosterone blocker. His renal function remain stable.

CONCLUSIONS:

Lobulated kidney appearance on radio-imaging may mimic kidney tumour appearance but also can be a rare anatomical variant of kidney therefore need further investigation to differentiate between the two as the management is very different. In this case, a renal biopsy was done because patient has significant proteinuria with renal impairment and the histopathology revealed to be focal global glomerulosclerosis.

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 52-71



SYMPTOMS BURDEN IN PATIENTS WITH END-STAGE RENAL DISEASE: A COMPARISON AMONG PATIENTS ON HAEMODIALYSIS, PERITONEAL DIALYSIS AND PALLIATIVE CARE IN A SINGLE-CENTRE EXPERIENCE

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INTRODUCTION AND AIMS:

Patients with end-stage renal disease (ESRD) whether on dialysis or palliative care have been shown to have multitude of symptoms. This study aimed to compare symptoms burden among patients on haemodialysis (HD), peritoneal dialysis (PD), or palliative care.

METHODS:

This was a cross-sectional study conducted in Hospital Tengku Ampuan Rahimah, Klang from April till September 2020. Patients diagnosed to have ESRD who are undergoing either HD or PD for at least 3 months as well as patients on palliative care with an estimated glomerular filtration rate (eGFR) of less than 15mL/min/1.73m² were included. Data were collected using Integrated Palliative Outcome Scale – Renal (IPOS–Renal) questionnaire and Modified Charlson Comorbidity Index. Demographic and prevalence data were analysed using descriptive analysis and comparison of symptoms burden among the three treatment groups were analysed with Kruskal-Wallis test followed by post-hoc test for pairwise significance testing.

RESULTS:

A total of 101 patients were recruited with 45.5% on HD, 31.7% on PD, and 22.8% on palliative care. The five most prevalent symptoms found were weakness (41.6%), itching (37.6%), pain (36.6%), difficulty in sleep (34.7%), and poor appetite (31.7%). Statistically significant differences among the three treatment groups were found for eight out of fifteen symptoms (pain, shortness of breath, weakness, poor appetite, drowsiness, poor mobility, difficulty sleeping, and changes in skin). Pairwise post-hoc test showed that PD was associated significantly with more pain, weakness, drowsiness, poor mobility, and difficulty sleeping compared to HD. Besides, PD was associated significantly with more pain and changes in skin compared to palliative care. On the other hand, palliative care was associated significantly with

more shortness of breath and poor appetite compared to HD.

CONCLUSIONS:

Within the limitations of the study, patients on PD were found to have more symptoms burden compared to patients on HD and palliative care.

Category: Medical

Session: Oral + e-Poster

Topic: Others

Abstract ID: 65-72



A DESCRIPTIVE REVIEW OF CONTINUOUS RENAL REPLACEMENT THERAPY (CRRT) ADMINISTRATION & OUTCOME IN A TERTIARY CENTRE IN KELANTAN

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INTRODUCTION AND AIMS:

Continuous renal replacement therapy (CRRT) is currently the preferred modality for treating haemodynamically unstable patients with severe acute kidney injury. The objective of the study is to observe the clinical characteristics of patients receiving CRRT and its outcome.

METHODS:

All patients who received CRRT from 1st October 2019 to 31st March 2020 in Hospital Raja Perempuan Zainab II (HRPZ II) Kelantan are identified for descriptive analysis. A total of 76 patients were included. Patient profiles such as age, comorbidities, diagnosis & clinical outcome were collected. Laboratory parameters such as full blood count, renal profile, arterial blood gas and coagulation profiles were also recorded. Data was transferred and analysed using SPSS version 23

RESULTS:

Almost all subjects are Malay (96.1%) with slight male predominance (59.2%). Mean age of subjects was 53.76 years (SD=17.31). Sepsis was the most common diagnosis (85.5%) with 47 patients (61.8%) requiring at least 3 types of inotropes. The baseline median creatinine level was 306.5 (IQR=398.75) while urea was 17.4 (19). The main vascular access site was femoral (86.5%); 55.4% and 31.1% for right & left side respectively. Only five subjects were given heparin during CRRT. Most commonly applied modalities are continuous venovenous hemofiltration (CVVH) & continuous venovenous hemodialysis (CVVHD). In 31 patients (40.8%), CRRT was electively ceased for various reasons such as death, hypotension and withdrawal of care. In-patient mortality was very high (86.6%). Among the 10 survivors, 6 subjects were dialysis free upon discharge.

CONCLUSIONS:

CRRT prescriptions generally involve severe sepsis patients with haemodynamic instability and are associated with poor prognosis.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 38-73



METABOLIC SYNDROME AND OBESITY FOLLOWING KIDNEY TRANSPLANTATION: A SINGLE CENTER STUDY

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INTRODUCTION AND AIMS:

Kidney transplant recipients (KTR) develop Metabolic Syndrome (MS) and obesity which are known risk factors for cardiovascular diseases. Many studies have shown KTR experiences an average weight gain of 5-10kgs over 5 years. The aim of this study is to look into prevalence of MS and weight gain pattern in KTR followed up in Serdang Hospital.

METHODS:

Ninety-six KTR follow-up at Serdang Hospital from 2006 until 2020 were analyzed at two time points. They were stratified into two categories (with and without MS) by modified National Cholesterol Education Program-Adult Treatment Panel III (NCEP-ATP III) criteria for Asians. Weight and BMI scores were recorded. Electronic medical records were used for data collection. Statistical analysis was done using SPSS version 25.

RESULTS:

Out of 96 patients, 60.4% were males with mean age of 52 ± 14.2 years; mean weight was 62.9 ± 13.8 kg with BMI of 23.1 (IQR 5.3). After a mean follow up of 9.83 ± 5.5 years, mean values of weight and BMI increased significantly (weight 2.8 ± 13.9 kg, $p=0.000$ and BMI 24.9, $p=0.001$). 26 patients had MS during the first review versus 31 patients during the 2nd review. MS patients have higher body weight, 68.8 ± 16.7 kg, $p=0.023$ and BMI 25.7 ± 4.5 , $p=0.01$ versus 71.1 ± 14.9 kg, $p=0.02$ and BMI 26.2 ± 4.37 , $p=0.05$ during both follow-ups. There was a reduction in systolic blood pressure of 6.1 ± 27.7 mmHg, $p=0.031$. Mean LDL level dropped from 3.38 to 2.93, $p=0.0017$ with therapy. However, mean triglyceride level increased from 1.72 to 1.80 and mean HDL level dropped from 1.43 to 1.35.

CONCLUSIONS:

Although the incidence of MS is up to 32% in our study, the mean weight gain was low compared to other published data. Close metabolic profile monitoring does help in optimizing the cardiovascular risk factors post-transplant in our study.

Category: Medical

Session: e-Poster

Topic: Transplant

Abstract ID: 70-75



THE IMPACT OF MOVEMENT CONTROL ORDER ON THE CARE OF NON-COVID-19 PATIENTS WITH KIDNEY DISEASE – A SINGLE CENTRE EXPERIENCE

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INTRODUCTION AND AIMS:

Various phases of Movement Control Order(MCO) were implemented in Malaysia to mitigate the COVID-19 outbreak. The first phase started from 18/3-12/05/2020. All services were affected to various degree, including healthcare. This analysis is to elicit the impact of MCO on non-COVID patients' care with kidney disease.

METHODS:

A retrospective analysis of nephrology patients attended Nephrology Clinic, day-care and admissions from March 2020 to February 2021 and compared to the annual census in 2018 and 2019.

RESULTS:

A total of 7507 patients were treated in 2020, with a majority(n=6961,92.3%) of them were outpatients. This figure was 20% reduced compared to 2018 and 2019, which reported a total of 9343 and 9219 patients. The reduction of outpatients clinics affected all sub-clinics in which haemodialysis affected the most with a 50% reduction(n=360). The other clinics were operating between 76.8%(renal transplantation,n=417), to an average of 85% for CKD(n=2732), general nephrology(n=2804) and new referrals(n=274). Whereas PD clinics and day-care Cyclophosphamide were unchanged. RRT counselling session operated at 25% capacity. The obvious reduction was seen in April where the clinic operated at the lowest capacity(13.3%). This number slowly increased to 42.8 % in May and subsequently picked up at 700 patients/ month.

Similar trend was seen with inpatients in which total admission reduced(n=546; 67.7%). The lowest admission rate was in May(40%). The mean age of patients admitted was 57.85±25.95 with equal gender distribution. Majority of them were Malays(n=347;63.6%) followed by Chinese(n=168;30.8%), Indian(n=23;4.1%) and

others(n=8;1.5%). More than half(n=311;56.9%) was ESRD patients whom admitted for fluid overloaded(n=102;18.7%), CRBSI(n=74;13.6%) and crash lander ESRD(n=64;11.7%). Those who needed dialysis(n=280) were treated with intermittent haemodialysis(n=240;85.7%) followed by SLEDD(n=23;8.2%) and the ratio of arteriovenous fistula:temporary vascular access was 2:3. Total RRT session was reduced(n=5917;77.9%) with the most affected modality was intermittent haemodialysis(n=5126;75.3%) but SLEDD and CRRT were unchanged. The elective admission for renal biopsy was not affected.

CONCLUSIONS:

Our nephrology services prioritized the critical care component during the Covid-19 pandemic.

Category: Medical

Session: e-Poster

Topic: COVID-19

Abstract ID: 66-77



SHORT TERM RENAL RESPONSE IN PATIENTS WITH LUPUS NEPHRITIS TREATED IN PPUKM

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INTRODUCTION AND AIMS:

Lupus nephritis affects 60% of patients with systemic lupus erythematosus (SLE). The landmark regimen with Cyclophosphamide; The NIH and Euro Lupus reported renal response at 6 and 12 months to be 26.1% and 85% versus 72.2% and 71% respectively whilst the ALMS trial reported 56% renal remission at 6 months with mycophenolate mofetil. PPUKM practises lower doses of cyclophosphamide together with lower doses of pulse methylprednisolone followed by oral prednisolone starting dose at 0.5mg/kg. The objective was to determine the renal response of lupus nephritis at 6 and 12 months among SLE patients in PPUKM.

METHODS:

A retrospective study of biopsy proven LN class III, IV + V patients treated with local protocols in PPUKM. Demographic data, disease history and laboratory investigation RESULTS: were collected and analyzed. Treatment outcome Complete remission(CR), Partial remission(PR) and Non responder(NR) at 6 and 12 months were analyzed.

RESULTS:

A total of 271 LN patients predominantly females (n=239, 88.2%) were recruited. Their mean age at LN diagnosis and duration of LN follow up were 29.81 ± 11.18 years and 16.56 ± 11.18 years respectively. Nephrotic syndrome (60.1%) followed by asymptomatic proteinuria (34.7%) were the commonest clinical presentation. 99.3% of patients were induced with IV pulsed methylprednisolone and 96.7% with IV Cyclophosphamide with cumulative dose of 4.14 ± 2.27gram over 5.48 ± 2.03 months. Renal remission (CR+PR) rate at 6 and 12 months was 76.4% and 89.3% respectively. Malay and Chinese ethnicity, serum albumin, serum creatinine, eGFR level, low complements level, nephrotic range proteinuria and triple maintenance therapy were

significantly associated with treatment outcome at 12 months. Serum albumin was the significant predictor of CR at 12 months. Only 4% of patients complicated with infection during induction period.

CONCLUSIONS:

Lower Cyclophosphamide and prednisolone resulted in similar efficacy and well tolerated.

Category: Medical

Session: Oral + e-Poster

Topic: Glomerulonephritis

Abstract ID: 66-78



OUTCOMES AMONG CORONAVIRUS DISEASE 2019 PATIENTS ADMITTED TO ICU WITH ACUTE KIDNEY INJURY REQUIRING DIALYSIS SUPPORT - A ONE-YEAR SINGLE CENTRE EXPERIENCE.

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INTRODUCTION AND AIMS:

Coronavirus Disease 2019 (COVID-19) patients presenting to hospitals are triaged based on clinical severity for and prognosis. Patients who are critically ill are admitted to the intensive care unit (ICU). These patients are at higher risk of developing complications and mortality.

METHODS:

A retrospective cohort study was conducted examining all adult patients diagnosed with COVID-19 who were referred for nephrology consult for renal replacement therapy (RRT) and admitted to ICU in HSgB from 1 March 2020 – 28 February 2021. We aim to describe the demographic, baseline characteristics, medical management and clinical outcomes of these patients.

RESULTS:

Out of 81 patients who required RRT during the study period, 63 (77.8%) were admitted to ICU. Majority (66.7%) were on intermittent hemodialysis, 33.3% were initiated on continuous renal replacement therapy (CRRT).

The cohort mean age was 59.1 years (SD 11.68), predominantly males (73%), Malaysian (93.7%) and Malay (73%). 88.9% had at least one medical comorbidity. Hypertension (69.8%) and diabetes mellitus (65.1%) were most commonly reported.

Common medical regimen were antivirals – favipiravir (36.5%); Kaletra (lopinavir/ritonavir) (23.8%); immunomodulators - Interferon (25.4%) , Tocilizumab (11.1%). Hydroxychloroquine was given to 25.4% patients.

We found ICU admissions to be significantly associated with severe COVID-19 on presentation (Category 5, 55.6%, $p < 0.001$), requiring inotropic support, mechanical ventilation, CRRT and steroid as part of therapy - (100%, $p < 0.001$), (93.7%, $p < 0.001$), (33.3%, $p = 0.004$) , (73%, $p < 0.001$) respectively.

This cohort also had significant association with ≥ 2 organ dysfunction (87.3%, $p < 0.001$), ≥ 20 days of hospital-stay, (58.7%, $p = 0.002$) and higher mortality rate (58.7%, $p < 0.001$).

We found no association between age, number of comorbidities and diabetic status with ICU admission.

CONCLUSIONS:

ICU admissions in COVID-19 patients with AKI requiring RRT has poorer outcome despite intensified treatment.

Category: Medical

Session: e-Poster

Topic:

COVID-19

Abstract ID: 71-79



FUNCTIONAL DEPENDENCE CHANGES IN PATIENTS STARTED ON PERITONEAL DIALYSIS THERAPY

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INTRODUCTION AND AIMS:

End stage kidney disease (ESKD) patients are primed towards renal replacement therapy based on their preferences, premorbid conditions, frailty status and independence level. ESKD patients expected to have improvement in functional status post kidney replacement therapy. Prospective study to investigate the effect on functional status after initiation of continuous ambulatory peritoneal dialysis (CAPD).

METHODS:

This study included new patients initiated on CAPD in Hospital Tengku Ampuan Rahimah from October 2019 till May 2020. Two components were assessed: Personal Activity of daily Living (PADL) and Instrumental Activity of daily Living (IADL) using validated questionnaires: Modified Barthel Index Form (PADL) and Lawton –Brody Instrumental Activities of Daily Living Scale (IADL) respectively. Patients participated in a structured interview by investigator within 2 weeks of CAPD initiation and at 4 months post CAPD initiation.

RESULTS:

Total of 30 patients were included in this study. Four patients dropped out as 2 passed away and 2 patients converted to haemodialysis. 53% were males and 88% were married. Mean age group was 51.3 ± 13.5 years old. Total of 19 patients performed CAPD independently and 7 patients had assisted CAPD. At 4 months of CAPD, total 19 patients had full independence in PADL vs 17 patients pre CAPD. Using McNemar's test there was no statistically significant improvement in both PADL ($p = 0.625$) and IADL ($p=1.000$) in 26 patients after initiation of CAPD for 4 months. Spearman coefficient showed PADL and IADL of patients remain the same post CAPD initiation, p value < 0.001 .

CONCLUSIONS:

These findings give reassurance for patients who are concerned about functional dependence after commencement of CAPD.

Category: Medical

Session: e-Poster

Topic: Peritoneal Dialysis

Abstract ID: 70-81



CLINICAL CHARACTERISTICS OF COVID-19 PATIENTS WITH ACUTE KIDNEY INJURY REQUIRING DIALYSIS - A SINGLE CENTER EXPERIENCE

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INTRODUCTION AND AIMS:

The WHO declared the COVID-19 outbreak a global health emergency on 30/1/20 with the first case of COVID-19 being reported in Malaysia on 25/1/20. There have been a total of 440,677 cases with 1683 deaths as of 9/5/21. Based on recent studies there have been reports of higher incidence of AKI among COVID-19 patients especially critically ill patients. As Hospital Sungai Buloh was among the major hospitals designated for managing COVID-19 cases, we decided to evaluate the characteristics of patients with severe AKI requiring dialysis in that centre.

METHODS:

A retrospective observational study was conducted to review patients diagnosed with COVID-19, who developed severe AKI, requiring dialysis in Hospital Sg Buloh, Malaysia from 1 March 2020 – 28 February 2021, derived from electronic medical records.

RESULTS:

Eighty-one patients were analysed. These patients had a mean age of 58.25(SD 11.8), were mainly male in gender(71.6%), were Malaysian(92.6%), and Malay in ethnicity(59.3%). Among subjects included, 90.1% reported at least one underlying comorbidity – majority had hypertension(70.4%) and diabetes mellitus(65.4%). On severity of disease, 43.2% were COVID 19 positive and critically ill with multi organ involvement (Category 5) on admission, and the percentage of Category 5 patients increased to 72.8% during the course of hospitalisation. Sixty-three patients(77.8%) were admitted to the ICU, 72.8% required intubation, and 59.3% required at least one inotropic support. Continuous renal replacement therapy(CRRT) was initiated in 25.9% of patients, 74.1% received intermittent haemodialysis. In hospital mortality

rate was 46.9%. Median length of stay was 19 days (IQR 10-25).

CONCLUSIONS:

Among COVID-19 patients with severe AKI, the majority of them had underlying co-morbid illness, required ICU admission and had a higher category of COVID-19 infection.

Category: Medical

Session: Oral + e-Poster

Topic: COVID-19

Abstract ID: 73-82



OUTCOMES OF PATIENTS WITH CORONAVIRUS DISEASE 2019 AND ACUTE KIDNEY INJURY REQUIRING RENAL REPLACEMENT THERAPY

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INTRODUCTION AND AIMS:

The Coronavirus disease 2019 (COVID-19) outbreak has been associated with high morbidity and mortality. Patients with severe COVID-19 are at increased risk of acute kidney injury (AKI). We describe the outcomes of COVID-19 patients with Stage 3 AKI requiring renal replacement therapy (RRT) and contributing factors.

METHODS:

This retrospective observational study included all patients aged ≥ 18 years with COVID-19 that developed AKI requiring RRT in Hospital Sg Buloh from 1st March 2020 until 28th February 2021. Demographic, clinical and laboratory data were obtained from the hospital information system.

RESULTS:

A total of 81 patients with COVID-19 developed AKI requiring RRT. Majority were males (71.6%), Malaysian (92.6%) and Malay (59.3%). 90.1% of patients reported at least one underlying medical comorbidity. On admission, 43% were COVID-19 category 5.

Among the patients involved, 77.8% required admission to the intensive care unit (ICU), mechanical ventilation (72.8%) and inotropic support (59.3%). Continuous renal replacement therapy (CRRT) was initiated in 25.9% of patients and 74.1% received intermittent HD. The median length of stay was 19 days (IQR 11.0-26.5).

In-hospital mortality rate was 46.9%. Factors associated with mortality were patients aged ≥ 60 years ($p=0.018$), COVID-19 Category-5 ($p=0.003$), mechanical ventilation ($p<0.001$), requirement of inotropic support ($p<0.001$), requirement of CRRT ($p=0.035$) and ICU admission ($p<0.001$).

On multivariate analysis, age was shown to have a significant impact on the outcome. Increase in one-year in

age was associated with higher mortality (OR 1.069; 95%CI 1.020-1.120; $p=0.005$), increase risk of mechanical ventilation (OR 1.045; 95%CI 1.001-1.091; $p=0.047$) and inotropic support requirement (OR 1.071, 95%CI 1.024-1.121, $p=0.003$). Co-morbidities ie diabetes mellitus and hypertension were not shown to have an impact on mortality or length of stay.

CONCLUSIONS:

Morbidity and mortality in our cohort of COVID-19 patients with AKI requiring RRT are high. The significant contributing factors are age, clinical severity and multiorgan involvement.

Category: Medical

Session: Oral + e-Poster

Topic: COVID-19

Abstract ID: 54-83



EXPERIENCES AND PREFERENCES OF END-STAGE KIDNEY DISEASE PATIENTS AND FAMILIES IN MALAYSIA: A MIXED-METHOD SYSTEMATIC REVIEW

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INTRODUCTION AND AIMS:

Background: To deliver patient-centred care to End-Stage Kidney Disease (ESKD) patients and their families, we should understand currently available evidence locally.

Aims: To identify, appraise and integrate all the available evidence on experiences and preferences of ESKD patients and their families in Malaysia.

METHODS:

Systematic review. PubMed, Cochrane Library and Registry of Trials and MyMedR databases were searched until the 7th of May 2021. In addition, hand searching for grey literature was included. Quality assessment performed using JBI critical-appraisal checklist.

RESULTS:

Initial search found n=1939 articles; only n=23 articles met the inclusion criteria. These were n=1 qualitative and n=22 quantitative; 1 randomized controlled, 1 quasi-experimental and n=20 cross-sectional design. A total of 11,066 participants (n=10,716,96.8%) were included. Majority were patients on hemodialysis (n=8740,81.6%), followed by peritoneal dialysis (n=1812,16.9%), non-dialysis therapy (n=100,0.9%) and transplantation (n=64,0.6%). Quantitative studies mainly reported sufferings in physical, psychological domains, include fatigue, pruritus, lack of sleep, depressive symptoms, stress and anxiety. These symptoms affect clinical outcomes and quality of life. The qualitative study provided triangulation, enhancing aspects of "total pain" experienced by ESKD patients.

The experiences and preferences were reported using different types of scales and questionnaires. Therefore, a meta-analysis could not be performed due to heterogeneity in the reported outcome scale measurements.

CONCLUSIONS:

Despite the relatively low quality, scarce evidence demonstrated that ESKD patients in Malaysia experienced a high symptoms burden. Unfortunately, no studies involving families' experiences. Hence, symptoms need to be identified to enable holistic care to be provided.

Future Implications:

1. Future studies should include nationwide participants using standardised tools, measurements and reporting, prospective design, longer duration, high quality, and consider using the pharmacological and non-pharmacological intervention.
2. More participants from patients on peritoneal dialysis, transplantation and non-dialysis pathway needed.
3. A huge knowledge gap in families of dialysis patients needs to be addressed immediately.

Category: Medical

Session: Oral + e-Poster

Topic: Others

Abstract ID: 67-84



VARIOUS OUTCOMES OF SWEET HYDROTHORAX, A RARE NON-INFECTIOUS COMPLICATION OF PERITONEAL DIALYSIS

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INTRODUCTION AND AIMS:

Pleuroperitoneal fistula leading to hydrothorax is a rare complication of peritoneal dialysis (PD). It is estimated to occur in 1.6% of PD patients. Previous literature documented 62% of cases were females, with 88% involved the right lung. Several treatment options exist, with surgical intervention being the most efficacious.

METHODS:

This case-series reports seven pleuroperitoneal fistula cases among PD patients in Penang General Hospital from 2010 until 2020.

RESULTS:

A total of seven pleuroperitoneal fistulas was reported. Main presenting complaints were poor ultrafiltration and dyspnoea. Majority of cases were female (n=5) with mean age of 54.86 years \pm 20.32. The mean duration from the commencement of peritoneal dialysis to the date of complication was 3.57 months \pm 2.51. As for the subsequent intervention, two patients were recommenced on DAPD from the previously CAPD regime with no recurrence over two years follow up. Another three patients underwent mini-thoracotomy or VATS with subsequent surgical pleurodesis. Of these, a patient developed recurrence within two months post-intervention, so was converted to haemodialysis. Another patient passed away five months post intervention due to peritonitis. The final two patients refused any intervention in order to continue with PD and thus was changed to haemodialysis.

CONCLUSIONS:

Despite its rarity, pleuroperitoneal fistula is a well-recognized complication of peritoneal dialysis. A high index of suspicion is mandatory for early diagnosis. Although surgical intervention is recommended unfortunately, it may not always guarantee success. Therefore, care should be tailored to the specific needs of each patient.

Category: Medical

Session: e-Poster

Topic: *Peritoneal Dialysis*

Abstract ID: 76-86



OUTCOMES AND RISK FACTORS OF END STAGE KIDNEY DISEASE PATIENTS WITH COVID-19 INFECTION : SINGLE TERTIARY CENTER EXPERIENCE

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INTRODUCTION AND AIMS:

End stage kidney disease (ESKD) patients with relative immunocompromised state have higher risk of more severe COVID-19 infection as compared to general population. In this study, we aim to study clinical characteristics, risk factors and outcomes of ESKD patients with COVID-19 infection from Serdang Hospital.

METHODS:

Prospective study recruited ESKD patients from Hospital Serdang with COVID-19 from 1 December 2020 to 31 March 2021. Clinical data and hospital course details were obtained from e-HIS system (electronic system of hospital). Data was analysed via SPSS version 25. Chi square and Independent T-test were used to analyse univariate variables.

RESULTS:

Total 68 patients were included, 61.8% were male patients, median age of 58 years old (age range 28-78), mortality rate was 50%, 85.3% were diabetics, 91.2% were hypertensive. 73.5% (50 patients) received regular dialysis, 26.5% (18 patients) received non regular dialysis. Mortality rate in patients with regular dialysis was 46% (23/50 patients) in comparison with patients with non-regular dialysis was 61% (11/18 patients). Patients received regular hemodialysis has higher mortality rate (51.8%, 14/27 patients) in comparison to regular peritoneal dialysis (39%, 9/23 patients). Independent risk factors for death are age($p=0.006$, $OR=1.527$), albumin($p=0.046$, $OR=0.779$) and cardiothoracic ratio(CT ratio)($p=0.003$, $OR=1.84$). CT ratio > 0.58 has higher risk of mortality in ESKD patient with COVID infection.

CONCLUSIONS:

ESKD patients with COVID infection have relative higher mortality rate in this study in comparison to other studies likely due to small sample size which reflect just “the tip of

iceberg”. Higher mortality were observed in ESKD patients with comorbidities, majority were in transition phase from newly diagnosed ESKD before established regular KRT and those who have yet to achieve their dry weight. Therefore, we should focus mainly on establishing regular kidney replacement therapy as soon as possible and achieving their target dry weight as the second goal.

Category: Medical

Session: e-Poster

Topic: COVID-19

Abstract ID: 22-88



OUTCOME OF PATIENTS ON MAINTENANCE DIALYSIS HOSPITALISED WITH COVID 19 IN HOSPITAL PULAU PINANG: SINGLE CENTER EXPERIENCE

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INTRODUCTION AND AIMS:

COVID 19 pandemic had been affecting worldwide, including Malaysia. Potential high-risk outbreak areas include Hemodialysis (HD) centers. Studies reported that the mortality rate of dialysis patients with COVID 19 can be as high as 20%.

METHODS:

This was a retrospective observational study, in which the records of all dialysis patients admitted to Hospital Pulau Pinang for COVID 19 infection, from 1st March 2020 till 30th April 2021 were reviewed.

RESULTS:

A total of 23 dialysis patients were admitted for COVID 19 infection during the study period (out of 2216 COVID 19 admissions). Mean patients' age was 58.7 ± 15.2 . Fifteen patients (65.2%) have diabetes mellitus, 22 patients (95.7%) have hypertension, and 9 patients (39.1%) have ischemic heart disease. Two patients were on continuous ambulatory peritoneal dialysis. Nineteen patients had regular dialysis in private or NGO units, while 4 in government centres. Mean length of stay was 14.8 ± 7.4 days. Most patients presented at early phase; 8 (34.8%) category 1 and 10 (43.5%) category 2; while 4 (17.4%) patients with category 4 and one patient with category 5. Fourteen patients had progression of disease category. Only 3 patients remained in category 1, 4 in category 2, 6 progressed to category 3, 5 each in category 4 & 5. Eight (34.8%) patients were admitted to ICU, of which 4 (17.4%) required ventilatory support, 3 (13%) required continuous renal replacement therapy. Twelve (52.2%) patients were given steroid, 11 (47.8%) patients were given Favipiravir. Two (8.7%) patients developed thrombosis, requiring anticoagulation. Four (17.4%) patients succumbed, 3 of which during ICU stay (Day 22, 24 and 44 of illness, respectively) and 1 (4.3%) post-discharged (Day 16 of illness).

CONCLUSIONS:

We reported mortality rate of 17.4% among our dialysis patients with COVID 19 infection, which were similar as other studies.

Category: Medical

Session: Oral + e-Poster

Topic: COVID-19

Abstract ID: 80-89



CHARACTERISTICS OF PATIENTS WITH HEPATITIS AND GLOMERULOPATHY IN SARAWAK GENERAL HOSPITAL

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INTRODUCTION AND AIMS:

Renal disease can occur in 3-5% of chronic hepatitis-B-virus (HBV) and <10% of hepatitis-C-virus (HCV) infected patients. There is limited data on glomerulopathy in patients with hepatitis in Sarawak.

METHODS:

HBV and HCV patients who had renal biopsies at our center from 2010-2019 were identified through Malaysian Registry of Renal Biopsy. Patients' notes were retrieved for data collection and analysis.

RESULTS:

Out of 1020 native biopsies over 10 years, 50 patients have hepatitis. 24 were HBV+, 24 HCV+ and 2 with HBV and HCV coinfection. Majority were males (76%) and young (66% Age 15-35). 54% were Sarawak natives, 38% Malay and 8% Chinese. The most common presentations were nephrotic syndrome (44%) and nephrotic-nephritic syndrome (28%). 34 patients (68%) had eGFR<60 and 10 patients (20%) needed dialysis. The 2 most common glomerulopathies were MCD (28%) and FSGS (20%).

Among HBV+ patients, there were equal distribution of males (54%) and females (46%) with majority (46%) aged 36-55 years. Renal histology included Diffuse proliferative GN (5), Membranous GN (4), FSGS (4) and IgAN (3). 3 patients have concomitant SLE with proliferative lupus nephritis. Most patients did not have HBV viral load data. 5 needed dialysis at presentation.

For HCV+ cases, majority (96%) were males and <35 years old. 18 cases (75%) had HCV RNA >2000 IU/ml. The most common renal biopsy findings were MCD (11) and FSGS (6). 4 needed dialysis at presentation.

The 2 patients with HBV and HCV coinfection were males aged <35years. Both had impaired renal function and one needed dialysis.

CONCLUSIONS:

HBV and HCV patients with glomerulopathy appeared to be equally prevalent in our population. However, patients' characteristics differ between the 2 groups with HCV mainly seen in young males suggesting that high risk behaviors may be important predisposing factors. Most presented with nephrotic +/- nephritic syndrome and impaired renal function.

Category: Medical

Session: e-Poster

Topic: *Glomerulonephritis*

Abstract ID: 77-90



OUTCOME OF FUNGAL PERITONITIS IN PERITONEAL DIALYSIS PATIENTS: A SINGLE-CENTRE EXPERIENCE

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INTRODUCTION AND AIMS:

Fungal peritonitis (FP) is a serious complication of peritoneal dialysis, resulting in significant morbidity, mortality and drop out from the CAPD programme.

METHODS:

All episodes of FP among peritoneal dialysis patients were evaluated retrospectively in Hospital Pulau Pinang during a 12-year period (2009 - February 2021). Diagnosis was based on raised cell count and isolation of fungi from PD effluent.

RESULTS:

Among 843 cases of PD peritonitis occurred, 33 (3.91%) FP were identified. Mean age was 56 ± 13.6 . Nineteen of the patients were males (57.6%). Mean PD duration was 50 ± 43.6 months. 69.7% of patients had diabetes mellitus. Twenty-four patients (72.7%) had FP at presentation while 7 patients (21.2%) had mixed growth of bacteria and fungus at presentation. Only 2 (6.06%) had secondary FP after initial treatment for bacterial peritonitis. Candida species were the most common pathogens isolated (n=28): Candida Albicans in 13 (39.3%), Candida Tropicalis in 7 (21.2%) and Candida Parapsilosis in 4 (12.1%). Cryptococcus Neoformans, Exophiala species, Fereydounia khargensis, Fusarium species, Penicillium species, Culvulariae species, Trichosporon Asahii, mixed growth of Candida Glabrata with Candida Dubliniensis in one case each. PD catheter removal and initiation of antifungal therapy was done for all patients except for 6 patients who died prior to culture positivity identification. Antifungal therapy was continued after catheter removal with 54.2% cases sensitive to fluconazole. Mortality rate was 42.4% (14). Sixteen (48.5%) patients were transferred to hemodialysis due to patients' preference. Reinsertion of Tenckhoff catheters were attempted in 3 (9.1%) patients but failed.

CONCLUSIONS:

FP is associated with high mortality rate. In those who survived peritonitis, the inflammatory process often causes irreversible damage to the peritoneal membrane leading to technique failure. Earlier identification of FP may assist in earlier initiation of antifungal and better outcome.

Category: Medical

Session: e-Poster

Topic: Peritoneal Dialysis

Abstract ID: 79-91



CASE SERIES OF NONTUBERCULOUS MYCOBACTERIAL INFECTION IN PERITONEAL DIALYSIS PATIENTS

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INTRODUCTION AND AIMS:

Peritoneal dialysis (PD) is the modality of dialysis for end-stage renal disease with increasing popularity especially during the current COVID-19 pandemic in which home dialysis is highly preferred. The most common complication of PD is infectious complication including peritonitis, catheter tunnel infection (TI) and exit site infection (ESI). Nontuberculous mycobacterium (NTM) is a rare cause of PD-related infections.

METHODS:

Retrospective cohort study of PD-related NTM infection in Sarawak General Hospital from year 2019 till 2021.

RESULTS:

8 cases of PD-related NTM infections were diagnosed over the 2 years. 7 patients had ESI, 2 had TI and 3 had peritonitis. 5 of them had recurrent granuloma requiring repeated excision. All the patients used gentamicin cream as exit site prophylactic antibiotic. The CAPD vintage before NTM infection ranged from 6 weeks to 2 years 7 months. The time from symptom onset to diagnosis varied from 10 days to 4 months. The most common organism grown was *M. abscessus* in 6 cases, whereas *M. fortuitum* was isolated in 4 cases. 2 patients grew both organisms. 7 out of 8 patients were treated with IV/IP Amikacin and all the patients received oral macrolides plus one or two types of oral fluoroquinolones, tetracycline, Bactrim or Linezolid. From our cohort, 6 patients failed pharmacological therapy requiring Tenckhoff catheter removal. 2 have had successful catheter reinsertion and remained on CAPD uneventfully; 3 converted to permanent haemodialysis; and 1 is on bridging haemodialysis awaiting catheter reinsertion. Only 2 patients were treated successfully with pharmacological therapy without need for catheter removal. However, both had other bacterial infections later.

CONCLUSIONS:

PD-related NTM infection is difficult to diagnose leading to delayed diagnosis and risk of PD dropout. Optimal treatment is not well-defined. Catheter removal is required in most cases.

Category: Medical

Session: e-Poster

Topic: *Peritoneal Dialysis*

Abstract ID: 49-92



SAFETY AND ADEQUACY OF TRANSPLANT KIDNEY BIOPSY BY NEPHROLOGISTS AT A TERTIARY TEACHING HOSPITAL

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INTRODUCTION AND AIMS:

Transplant kidney biopsy (TKB) is performed for specific clinical indications or as part of a surveillance program (protocol biopsy). Nonetheless, TKBs bring a risk for serious complications and not all biopsies attained satisfactory tissue. We therefore examine the safety and adequacy of TKBs performed at UMMC.

METHODS:

We retrospectively collected clinical history, blood RESULTS, and renal biopsy reports for all the patients' undergone TKB using electronic medical record from January 2015 to April 2021. We performed 725 TKBs and 666 TKBs with complete data were analysed. The 666 TKBs were made up of 241 patients and 471 of 666 (70.7%) TKBs were protocol biopsy.

RESULTS:

Eighty-four percent of the TKBs were done as outpatient and the kidney-recipients consist of 67.9% male, 66.5% Malaysian-Chinese with median age of 42 years-old (IQR: 34.8-52.1), and transplant-vintage of 13.8months (4.4-51.2). The median BMI was 23.6kg/m²(21.0-27.1), pre-biopsy SBP 140mmHg (129-150), DBP 82mmHg (74-90), and kidney BPL 10.8cm (10.0-11.7). Twenty-cases (3%) were aided with pre-biopsy DDAVP and 7 cases (1.1%) required pre-biopsy transfusion.

Adequacy of TKBs for histological examination recorded 85.3% and diagnostic yield was 94.7%. Analysis showed median passes of 2 (2-3), tissue-core length of 1.3cm (1.0-1.8), length/pass 0.85cm (0.62-1.17), median of 14 glomerulus-yield/biopsy (9.0-20.0), glomerulus/pass of 6.5 (4.0-9.5), glomerulus/tissue-core length of 7.8glomerulus/cm (4.6-11.3).

Complications observed include post-biopsy pain; 39 cases(5.9%), immediate frank haematuria; 31 cases(4.7%) with median onset of 1 hour(1-2), immediate post-biopsy haematoma; 10 cases(2.1%), and 25 cases(3.8%) required admission post-biopsy with median hospitalisation of 1 day(1-7). Two-cases(0.3%) required post-biopsy transfusion. No embolization was performed but 2 cases(0.3%) required nephrectomy due to post-biopsy haematoma. Three deaths (0.5%) within 1 month post-biopsy observed, but none related to TKBs.

CONCLUSIONS:

TKBs performed by nephrologists at UMMC showed similar diagnostic yield with lower complications compared to available literatures.

Category: Medical

Session: e-Poster

Topic: Transplant

Abstract ID: 9-93



INCIDENCE OF ACUTE RENAL INJURY POST CORONARY ARTERY BYPASS GRAFTING SURGERY IN HOSPITAL UNIVERSITI SAINS MALAYSIA (HUSM)

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INTRODUCTION AND AIMS:

13 to 36% patients underwent coronary artery bypass grafting (CABG) surgery developed acute renal failure (AKI) postoperatively. Furthermore, the presence of AKI postoperatively are associated with a substantial increase in mortality (Tolwani, 2014).

METHODS:

We retrospectively reviewed thirty-nine records of patients that had CABG surgeries done in HUSM from Jan 2021 to April 2021.

RESULTS:

Only one case was an emergency CABG surgery while the others were planned surgeries. The mean age was 61-year-old (range 47 – 75-year-old) with male gender constituted 79.5% of the patients. Twenty-seven patients (69%) have diabetes mellitus and thirty-four patients (87.2%) have hypertension. There were sixteen patients (41%) with CKD stage 3, no CKD stage 4 and only one (2.6%) with CKD stage 5. The overall mean eGFR was 62.2 mL/min/1.73m² with average creatinine level of 116.8 umol/L. Based on Acute Kidney Injury Network (AKIN) criteria, thirteen patients (33.3%) have developed AKI in 24 hours or more post-surgery with six patients with AKIN 1 (15.4%), one patient with AKIN 2 (2.6%) and six patients with AKIN 3 (15.4%). Five patients with AKIN 3 (12.8%) required dialysis including two cases required Continuous Renal Replacement Therapy (5.13%). Consequently, the only mortality recorded was from the emergency surgery. The one patient with baseline CKD stage 5 become dialysis dependent post-surgery while the other three patients that required dialysis post-surgery able to recover renal function prior to the hospital discharges.

CONCLUSIONS:

Postoperative AKI occurred in 33.3% of our patients which are comparable with some literatures (ranged 13% to 36%) (Linda et al., 2014; Wintgen et al., 2021). Higher prevalence of diabetes mellitus and lower baseline GFR prior to surgery may contribute to higher incidence of postoperative AKI. We noted worse clinical outcome in those who had an emergency CABG surgery or underlying CKD stage 5.

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 81-94



MONOCLONAL GAMMOPATHY OF RENAL SIGNIFICANCE: A FORGOTTEN IDENTITY

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INTRODUCTION AND AIMS:

Monoclonal gammopathy of renal significance (MGRS) is rare and only 10% of monoclonal gammopathy of unknown significant (MGUS) patients developed MGRS.

METHODS:

A 71-year-old man with underlying hypertension, gout and IHD presented with nephrotic syndrome and worsening renal function. Laboratory investigations showed albumin 28 g/dL, ESR of 101mm/hr and UPCI of 619.47mg/mmol. Serum and urine electrophoresis (SUEP) showed paraproteinemia of IgM lambda but urine immunofixation revealed kappa light chain. There was no hypercalcaemia or skeletal lytic lesions. The viral screening, tumour marker and imaging with CT thorax, abdomen and pelvis were negative.

The light microscopy assessment of the renal biopsy showed mesangial matrix expansion with mild mesangial cells hypercellularity forming nodular lesions. No subendothelial or subepithelial deposits was seen. Congo red was negative, and kappa and lambda stains showed polyclonality with no light chain restriction. The electron microscopy assessment revealed similar findings with no evidence of glomerular or tubular basement membrane deposits suggesting of light chain deposit disease (LCDD). Unfortunately, there was no glomerulus available for immunofluorescent study.

RESULTS:

The patient was started on trial of steroids after failed conservative therapy. He responded well with marked resolution of clinical symptoms and improved renal function. Subsequent SUEP revealed persistent paraproteinemia of IgM lambda origin making the diagnosis of MGRS more likely. BMAT showed no evidence of excess plasma cells and no evidence of extramedullary plasmacytoma was found on PET Scan. Haematology consult was sought for consideration

of chemotherapy for the definitive management of the disease.

CONCLUSIONS:

Diagnosing MGRS is difficult owing to its rarity. In monoclonal gammopathy deposit disease (MGDD) nodular expansion is frequently found on electron microscopy. The definitive management of MGRS, depending on clinical presentation and progression, may require alkylating agent in an effort to ensure renal survival.

Category: Medical

Session: e-Poster

Topic: *Glomerulonephritis*

Abstract ID: 51-96



THE CHARACTERISTICS AND OUTCOME OF COVID-19 PATIENTS WITH ACUTE KIDNEY INJURY: A SINGLE CENTRE EXPERIENCE

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INTRODUCTION AND AIMS:

Acute kidney injury (AKI) is an important complication of coronavirus disease 2019 (COVID-19) infection. Many observational studies found higher mortality in COVID-19 patients who developed AKI.

METHODS:

We described a single centre retrospective study of patients that was admitted to Hospital Canselor Tuanku Muhriz (HCTM) with the diagnosis of COVID-19 from December 2020 to March 2021. Patient aged less than 18 and patient with underlying ESKD were excluded from the study. We described the frequency of AKI, the characteristics of patients who developed AKI and the outcome.

RESULTS:

Among 231 patients admitted, AKI occurred in 39 patients (13.9%). There are more male patients who were affected, and most patients presented with COVID-19 categories 3 and above suggesting a higher prevalent in patients with severe presentation of the disease. The proportion of patients who developed stages 1, 2 and 3 AKI were 48.7%, 17.9% and 33.3%, respectively. 28.2% of patient with AKI required RRT and in-hospital mortality was 30.8% among our AKI cohort. The patients with severe clinical presentation of COVID-19 (Category 4 and 5) on admission, had a poorer outcome with high proportion requiring RRT, critical care admission and mortality. There was also a higher incidence of ARDS in those with severe AKI (stage 3), 69.2%. A multivariate analysis showed that admission category of COVID-19 severity, was significantly associated with the need for RRT. (OR 11.6 CI 1.79-76, p-value: 0.01)

CONCLUSIONS:

Our data showed similar incidence of AKI in patient with COVID-19 infection compared to the worldwide incidence. The data showed a trend of poorer outcome in patients presenting with more severe clinical presentation.

Category: Medical

Session: e-Poster

Topic: COVID-19

Abstract ID: 51-97



A RARE CASE OF PRCA IN LONG-ACTING METHOXY POLYETHYLENE GLYCOL-EPOETIN BETA

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INTRODUCTION AND AIMS:

Antibody-mediated pure red cell aplasia (PRCA) due to erythropoietin stimulating agent (ESA) is a rare disease that complicates management of anaemia in patients on chronic dialysis. Diagnosis is made based on severe erythroid hypoplasia on bone marrow aspirate, with the presence of Anti-erythropoietin (EPO) antibodies.

METHODS:

Case Report

RESULTS:

A 58-year-old man, with one-year history of ESRF on regular haemodialysis presented with anaemia following a reduction in Epoetin-beta dose over two months. Investigation showed Hb6.5g/dL with normocytic normochromic (NCNC) appearance. There was no history of bleeding or jaundice. On examination, patient had no hepatosplenomegaly. He presented one month later with similar complaint with Hb4.2g/dL. OGDS and colonoscopy showed no source of bleeding. He then moved to a new dialysis centre and during this transition, his ESA was interrupted over three months leading to another hospitalisation for severe anaemia. Eventually patient received the first dose of ESA, Methoxy polyethylene glycol-epoetin beta (CERA) at 100ug monthly. Nevertheless, his anaemia persisted requiring monthly admissions for the subsequent three months. Investigations revealed adequate kt/v and normal PTH, TFT, iron, B12 and folate level. PBF showed NCNC anaemia with no other abnormalities but reticulocyte was only 0.2%. BMAT revealed nearly absent erythroid precursor cells. Anti-EPO taken at five months of CERA initiation was positive. Despite early cessation of ESA, trial of prednisolone and ciclosporin, his anaemia persisted requiring regular blood transfusion.

CONCLUSIONS:

PRCA due to long-acting ESA is extremely rare, unlike the earlier version of erythropoietin alpha, yet we demonstrated this incidence in patient who had developed severe anaemia after receiving even the first dose. The presence of Anti-EPO and BMAT findings after receiving uninterrupted ESA administration confirmed PRCA. The immunogenicity property to CERA still remained for further discussion. This case highlights the importance of early recognition of PRCA in anaemia cases hyporesponsive to any form of ESA.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 83-99



SCHEDULED NEPHROLOGIST VISITS TO PRIMARY CARE? YOU GOTTA BE 'KIDNEY' ME!

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INTRODUCTION AND AIMS:

Since 2019, there has been a visiting nephrologist to KK Greentown on a monthly basis. The objective of this study was to look at interventions and outcomes of patients seen by them.

METHODS:

A cross-sectional study was conducted among 50 patients referred to the nephrologist during the visiting clinic from February 2019 to February 2020. The data were reviewed retrospectively from their medical records. Of the 50 patients, only 35 with complete records were included in analysis.

RESULTS:

18 (51.4%) were male and 17 (48.6%) were female. The median age was 70 years (range 37-89). 21 (60%) had their medications optimized, nine (25.7%) were referred to nephrology clinic Hospital Raja Permaisuri Bainun (HRPB), 3 (8.6%) were referred to the emergency department, one (2.9%) was referred to surgical department, and 1 (2.9%) enrolled in research.

The mean systolic and diastolic BP pre-referral were 154.1 ± 18.4 and 81.8 ± 8.7 compared to post-referral 146.6 ± 16.2 and 76.1 ± 9.5 and were statistically significant $p=0.017$, $p=0.002$ respectively. The mean urea and creatinine of the patients showed an insignificant increase from 11.7 ± 4.5 to 12.8 ± 6.0 for urea and 200.1 ± 64.1 to 220.4 ± 142.6 for creatinine. The eGFR showed an insignificant improvement from 29.2 ± 14.9 to 30.9 ± 17.7 . The HbA1c improved significantly from 7.2 ± 1.6 to 6.8 ± 1.1 , $p=0.038$. The other parameters i.e FBS, TC, TG and LDL did not show much difference except for HDL from 1.0 ± 0.2 to 1.1 ± 0.2 , $p=0.016$.

CONCLUSIONS:

Nephrologist visiting primary care centers seems to be a positive move, and it can be expanded if feasible considering nephrologist manpower and where there is a need in primary care settings. They can help augment the role of family medicine specialists in managing patients with CKD in primary care.

Category: Medical

Session: Oral + e-Poster

Topic: Others

Abstract ID: 60-101



RETINAL CHANGES AND CARDIAC BIOMARKER ASSESSMENT IN RELATION TO CHRONIC KIDNEY DISEASE: A SINGLE CENTRE STUDY

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INTRODUCTION AND AIMS:

Introduction: Prevalence of chronic kidney disease (CKD) is rising, and early detection is needed to retard disease progression and also to detect cardiovascular (CV) risk, which is the main cause of death in end stage renal disease (ESRD). Retinal changes are proven to be good predictors of CKD and cardiac biomarkers have been useful in CV risk stratification.

Aim/hypothesis: To demonstrate the correlation between retinal changes and cardiac biomarkers with CKD.

METHODS:

A single center cross-sectional study recruiting 84 patients with even distribution between CKD stages 3, 4 and 5 (non-dialysis) from Nephrology Clinic Universiti Kebangsaan Malaysia Medical Center (UKMMC). Retinal parameters (retinal vessel tortuosity, central retinal venular equivalent (CRVE), central retinal arterial equivalent (CRAE) and macula volume) and cardiac biomarkers (high sensitivity C-reactive protein (hs-CRP) and asymmetric dimethylarginine (ADMA) in relation to CKD (represented by eGFR, proteinuria and creatinine level) were analyzed.

RESULTS:

eGFR had a weak negative correlation with retinal vessel tortuosity ($r=-0.220$, $p=0.044$). For CRVE, eGFR had a weak negative ($r=-0.236$, $p=0.031$), and creatinine ($r=0.280$, $p=0.010$) and proteinuria ($r=0.342$, $p=0.001$) a weak positive correlation. eGFR had a weak negative ($r=0.370$, $p=0.001$) whereas creatinine ($r=0.624$, $p<0.001$) and proteinuria ($r=0.313$, $p=0.04$) had a positive correlation with hs-CRP. Diabetic patients had higher CRVE compared to non-

diabetics ($p=0.02$). History of ischemic heart disease was associated with smaller macula volume ($p=0.038$). For retinal vessel tortuosity, gender had a negative influence ($r^2=0.066$, $p=0.031$), and HbA1c a positive influence ($r^2=0.066$, $p=0.047$). There was a positive influence of age ($r^2=0.183$, $p=0.012$) and negative influence of hs-CRP ($r^2=0.183$, $p=0.045$) on CRVE. For macula volume, diabetes had a negative effect ($r^2=0.015$, $p=0.040$) and smoking a positive effect ($r^2=0.015$, $p=0.012$).

CONCLUSIONS:

Retinal vessel tortuosity, CRVE and hs-CRP had significant correlation with CKD and these parameters have the potential as complementary tools to stratify CKD and CVD risk non-invasively.

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 85-102



SEVERE COMMUNITY-ACQUIRED CLOSTRIDIUM DIFFICILE INFECTION IN IMMUNOCOMPETENT PATIENT WITH RENAL TUBULOPATHY

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INTRODUCTION AND AIMS:

Clostridium difficile infection (CDI) is commonly associated with hospital-acquired and antibiotic-induced diarrhoea causing pseudomembranous colitis and in severe form may lead to toxic megacolon. Patients of more than 65 years old, with prolonged hospitalization and broad-spectrum antibiotics use are more likely to acquire CDI.

METHODS:

Case Report

RESULTS:

A 24-year-old man presented with severe diarrhoea and generalised weakness in background of Gitelman syndrome. On presentation, he was dehydrated but hemodynamically stable. Investigations revealed hyperleukocytosis (TWC $54 \times 10^9/L$; neutrophil $49.8 \times 10^9/L$), CRP 12.9mg/dl and serum potassium of 1.1mmol/L.

Aggressive volume resuscitation and correction of electrolytes abnormalities were promptly commenced, and IV ceftriaxone initiated for acute gastroenteritis. He subsequently deteriorated into septic shock. Initial stool culture was positive for *Clostridium difficile*, both *Clostridium*-specific glutamate dehydrogenase (GDH) and toxin, hence antimicrobial was changed to vancomycin. His renal tubulopathy with concomitant severe polyuria and electrolytes imbalance required close monitoring in intensive care unit. Serum creatinine remained within normal range. Full blood picture showed features of leukemoid reaction with leftward shift in neutrophilia without any blast. Elevated leukocyte alkaline phosphatase was suggestive of reactive aetiology.

TWC peaked at $101 \times 10^9/L$ on day five, followed by the resolution of diarrhoea with normalisation of TWC by 2 weeks.

CONCLUSIONS:

The increased incidence of CDI, attributed to the uncontrolled use of broad-spectrum antibiotics is also observed in the community setting. In severe cases, the observed leukemoid reaction (LR) is associated with mortality up to 50%. LR is defined as persistent neutrophilic leukocytosis above 50,000 cells/ μL due to reactive causes after excluding leukaemias, and associated with severe infections, malignancies, and severe haemorrhage.

To our knowledge, this is the first case of CDI in a patient with Gitelman syndrome, and its occurrence in young, immunocompetent individual with tubulopathy at severe form, posed both complicated management dilemma and raised concern of the increasing prevalence of CDI in the community.

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 83-103



EVALUATING THE CAPD TECHNIQUE SURVIVAL OUTCOME WITH DECONTAMINATION PROCEDURE FOLLOWING PERITONITIS IN SARAWAK GENERAL HOSPITAL: 5-YEAR EXPERIENCE

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INTRODUCTION AND AIMS:

Background: Peritonitis is the most common cause of CAPD technique failure and contributes significantly to patients' mortality. Data is lacking on the benefit of decontamination using a fibrinolytic agent following peritonitis on technique survival.

Objective: To evaluate CAPD technique survival after decontamination with a fibrinolytic agent for peritonitis.

METHODS:

METHODS:: A retrospective cohort study with data collected from CAPD patients who developed peritonitis over 5 years (2014-2018) in the Sarawak General Hospital. Decontamination using an intraperitoneal thrombolytic agent (urokinase, alteplase or tenecteplase) in addition to standard antibiotic therapy has been practiced in our centre since 2016. CAPD technique survival rates were followed up till 31st December 2020 between the group receiving decontamination and the group that did not. RESULTS: were performed using SPSS Version 26.

RESULTS:

RESULTS:: A total of 115 patients with a first episode of peritonitis were included in our study, with 50 (43%) of them receiving fibrinolytic agents for decontamination. Overall, the mean technique survival post-peritonitis of our cohorts was 32.7 ± 2.4 months. Technique survival was 86%, 58% and 40% after 12, 24 and 36 months for the group receiving decontamination, vs 63%, 42% and 34% for the corresponding periods in the group that did not. However, the difference did not reach statistical significance ($p=0.102$). There was also no difference in the types of organisms causing peritonitis between two groups ($p=0.4$).

CONCLUSIONS:

Conclusion: CAPD technique survival improved numerically after decontamination therapy. The statistically non-significance between the two groups could be due to our small sample size.

Category: Medical

Session: e-Poster

Topic: Peritoneal Dialysis

Abstract ID: 88-104



END OF LIFE CARE PREFERENCES AMONG PATIENTS ON MAINTENANCE HAEMODIALYSIS IN KUANTAN

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INTRODUCTION AND AIMS:

There are growing evidences of the end of life care role for end stage renal disease patients who are associated with high morbidity and mortality rate despite being on dialysis therapy. It necessitates effective communication via shared decision making between the nephrologists and patients. However, the local data on the patients' preferences is yet sparse. Hence, this study aimed to describe the end of life care preferences among patients on maintenance haemodialysis treatment in Kuantan, Pahang.

METHODS:

A cross-sectional study was conducted among 350 patients from 14 outpatient centres. Patients who fulfilled the inclusion criteria were recruited via convenient sampling and data collection began from March till June 2019. Participants completed the validated questionnaire in structured, interview-based surveys by the researcher or trained interviewers.

RESULTS:

The highest number of respondents preferred a plan of care that relieves pain or discomfort and improves quality of life as much as possible over prolonging life. Patients' preferences of being at home approaching end of life rather than receiving active interventions and treatments in the hospital was reported in most respondents. Majority reported that the decisions of initiating dialysis treatment are not of their personal choices, but rather of their physicians' or family members' decisions. More than 50% of them were comfortable discussing end of life issues with their nephrologists regularly. However, the discussion rarely took place with 60% of them never engage in any discussion concerning their preferences on the end of life care choices in the past 1 year.

CONCLUSIONS:

The study demonstrated that only a minority have engaged in the discussion on the end of life care choices and preferences with their treating health professionals despite their wish and comfortability to do so. The RESULTS: highlight the inadequacy of the end of life care in the local practice.

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 86-105



OUTCOMES AND CAUSATIVE MICROORGANISMS OF CONTINUOUS AMBULATORY PERITONEAL DIALYSIS ASSOCIATED PERITONITIS IN HOSPITAL RAJA PERMAISURI BAINUN, PERAK, MALAYSIA.

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INTRODUCTION AND AIMS:

Continuous ambulatory peritoneal dialysis (CAPD) is one of the main modalities of dialysis offered in Hospital Raja Permaisuri Bainun (HRPB). The aim of this study is to determine the incidence, the microbiology profile, and the outcome of CAPD peritonitis in all CAPD patients under follow-up at the HRPB.

METHODS:

A retrospective medical record review of all CAPD patients who developed CAPD peritonitis under follow-up at the Hospital Raja Permaisuri Bainun, Perak, Malaysia from 2019 until 2020.

RESULTS:

During the 2-year period, there were 158 episodes of peritonitis recorded. The overall peritonitis rate was 0.25 episodes per patient year. The microorganisms isolated were Gram-positive 46.2%, Gram-negative 22.78%, fungi 3.16%, non-tuberculous mycobacterium 1.27%, Mycobacterium tuberculosis 0.63%, mixed growth 1.27% and culture negative 22.78%. There was a significant rise in incidence of Coagulase negative Staphylococcus (CONS), from 8 to 18 patients over the 2 years, which can be attributed to touch contamination. Overall, the most common gram-positive was still Staphylococcus Aureus while the gram-negative were Escherichia Coli and Klebsiella Pneumoniae (both equal number=10). The culture-negative peritonitis rate was 22.8%. The peritoneal dialysis catheter was removed in 54 episodes (34.18%). The catheter loss was highest among the Gram positive, 22 episodes (40.7%) followed by gram negative and no growth, 12 episodes (22.2%) and 10 episodes (18.52%) respectively.

CONCLUSIONS:

Although the peritonitis rate is acceptable, the higher rates of culture negative peritoneal fluid sampling and catheter lost rate warranted for special attention and improvement. Primary prevention protocol with emphasis on touch contamination prevention needs to be emphasized.

Category: Medical

Session: Oral + e-Poster

Topic: Peritoneal Dialysis

Abstract ID: 74-106



PARAFFIN WASHOUT IMMUNOFLOUORESCENCE TECHNIQUE IMPROVES SAFETY AND ADEQUACY OF TRANSPLANT KIDNEY BIOPSY

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INTRODUCTION AND AIMS:

Transplant kidney biopsy (TKB) tissues are usually dissected 0.5-1.0cm for fresh sample immunofluorescence study (FSIF). Paraffin washed-out immunofluorescence (PWIF) technique doesn't require segmentation of the sample which may jeopardise the sample adequacy for histopathologic examination (HPE). Hypothetically, it reduces biopsy passes and complications.

METHODS:

We retrospectively collected clinical history, blood RESULTS:, and renal biopsy reports for all the patients' undergone TKB using electronic medical record at UMMC from 1/1/2015-31/4/2021. We performed 725 TKBs and 666 TKBs with complete data were analysed. The 666 TKBs were made up of 241 patients and 48 of 666(7.2%) employed PWIF method since 13/10/2020 in view of COVID-19 pandemic. We collected 65 TKBs from 13/10/2018-31/4/2019 as control which used FSIF method.

RESULTS:

The kidney-recipients consist of 63.7% male, 59.3% Malaysian-Chinese with median age of 41.9 years old (IQR: 35.4-50.9), and transplant-vintage of 14.0 months (4.8-58.7). The median BMI was 24.0 kg/m² (21.2-27.6), mean pre-biopsy SBP 140+15mmHg, DBP 83+10mmHg, and kidney BPL was 10.8+1.2cm.

Statistically significant difference observed in adequacy of TKBs between FSIF and PWIF for HPE (87.7% vs 100%), $p=0.012$; and the association is moderately strong, Cramer's $V=0.237$. The diagnostic yield showed no difference (96.9% vs 100%), $p=0.99$. Passes were lesser in PWIF, $p=0.000$, $r=0.50$ with longer core for HPE analysis (FSIF 1.2cm vs PWIF 1.4cm), $p=0.024$, $r=0.21$, more glomerulus in HPE core (FSIF 13cm vs PWIF 16cm), and more glomerulus/pass (FSIF 6.5 vs PWIF 11.0), $p=0.000$, $r=0.43$.

No difference in the incidence of complications between groups: pain (1.5% vs 0.0%), $p=0.388$, gross haematuria (1.5% vs 4.2%), $p=0.390$, haematoma (0.0% vs 4.2%), $p=0.097$, and admission (0.0% vs 2.1%), $p=0.242$. There was no embolization and nephrectomy done. One death in PWIF but unrelated to TKB.

CONCLUSIONS:

PWIF technique increased the TKB adequacy with lesser pass but no difference in the incidence of complications.

Category: Medical

Session: Oral + e-Poster

Topic: Others

Abstract ID: 9-107



CONFRONTING THE PANDEMIC, RECONFIGURATION NEPHROLOGY SERVICES; A NARRATIVE REPORT FROM A TEACHING HOSPITAL - UNIVERSITI KEBANGSAAN MALAYSIA (UKM)

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INTRODUCTION AND AIMS:

Malaysia was hit with the third wave of pandemic COVID-19 since September 2020 till date with sudden surge of cases-mainly involved the vulnerable group. The presentations are relentlessly severe, and the current situation is critical. Explicitly, it has over-strained the ICUs and kidney replacement therapy (KRT) services nationwide, including Nephrology Unit in our teaching Hospital. We highlight the key strategies that has been implemented in our centre and innovative approaches to ensure that the services are unconstrained, maximize the accessibility and minimize the risk of cross-infection between staff and patients.

METHODS:

A narrative report on the nephrology contingency plan during the pandemic.

RESULTS:

Restructuring the nephrology services in delivering efficient KRT are paramount. Continuous Kidney Replacement Therapy is the main modality used in critical care settings and ambulatory dialysis facilities if required. Other dialysis modality is considered, as necessary. The prescription for KRT was guided by necessity and burden. Advanced purchase agreements were made to acquire dialysis machines to boost the KRT capacity. A dedicated ultrasound machine was placed in COVID ward to aid the procedures and fluid assessment. All isolation rooms and selected areas in the general ward were equipped with a portable RO water piping system for dialysis purposes hence, to minimize movement. Staff preparedness in dealing with this pandemic is our priority. They were trained on handling the dialysis machine, solutions, consumables, and disinfection process as part of training. A dedicated dialysis nurse was assigned

in COVID related ward and be part of the managing team. They must strictly follow the SOP in managing dialysis patients as per protocol.

CONCLUSIONS:

The pandemic has evidently impacted the clinical practice in managing dialysis patients. Restructuring the services is an approach to ensure the sustainability of the Nephrology services to fit with the demand in fighting COVID-19 pandemic.

Category: Medical

Session: e-Poster

Topic: COVID-19

Abstract ID: 87-10



COVID-19 OUTBREAK- MANAGEMENT AND OUTCOME OF HAEMODIALYSIS (HD) PATIENTS AND STAFF IN A SINGLE HD CENTRE

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INTRODUCTION AND AIMS:

Patients on haemodialysis (HD) are highly susceptible to Covid-19 given their pre-existing comorbidities, older age, compromised immune system and regular visits to dialysis centres.

METHODS:

We present the analysis of a COVID-19 outbreak in a stand-alone HD centre of 46 patients and 15 staff in November 2020 and report the incidence, clinical course and outcome of the infection.

RESULTS:

Thirty (65.2%) HD patients contracted Covid-19 and were hospitalised, with 19 (61.2%) diagnosed with stage 3 Covid-19, while 8 (25.8%) with stage 4. Seven (23.3%) patients needed Intensive care monitoring of which 5 required mechanical ventilation. Cytokine release syndrome was reported in 3 patients, whereby 2 survived and one succumbed to Covid-19. There were 5 (16.7%) recorded deaths, 1 directly from Covid-19, while the other 4 from organising pneumonia, bowel ischaemia, brain abscess and intracranial haemorrhage. Respiratory failure is a significant risk factor for death ($p=0.003$). The median ferritin level was significantly higher [500 (400-600) vs 300 (200-350) ug/L, $p=0.011$] in non-survivors compared to survivors. Dialysis vintage did not demonstrate a remarkable association with death, with a mean of 3.7 ± 2.7 vs 5.8 ± 3.7 years ($p=0.246$) among non-survivors and survivors respectively. Similarly, diabetes and CRP values failed to demonstrate a significant association. The median age of the survivors was 59 (54.5-69.0) years with a length of stay of 14 (11.5-17.5) days. As for HD staff, 6 (40%) were positive with 3 diagnosed with stage 3 Covid-19. None required ICU care and were discharged well.

CONCLUSIONS:

Mortality in HD patients infected with Covid-19 is very much higher as compared to the general population with increased morbidity and hospital resources. Vigilant measures to keep them safe is of paramount importance. Strict standard operating procedures must be adhered to at all times by staff and patients.

Category: Medical

Session: e-Poster

Topic: COVID-19

Abstract ID: 89-110



IN-CENTRE INTERIM PERITONEAL DIALYSIS (IPD) AS A VIABLE OPTION FOR BRIDGING TILL DEFINITE RENAL REPLACEMENT THERAPY (RRT)

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INTRODUCTION AND AIMS:

Incident end stage renal disease (ESRD) patients who are unprepared for long term RRT are at risk of morbidity and mortality related to the complications of renal insufficiency, as well as intravenous catheterisation. In-centre IPD has been employed as a bridging therapy while patients prepare for long term RRT. This study aims to review outcomes of patients being put on this bridging therapy.

METHODS:

A total of 30 patients were retrospectively analyzed from January 2019 until December 2020. Patient demographics, IPD indications, duration on IPD, definite RRT plans, and PD related infection profile, were examined and reported.

RESULTS:

Their average age is 49.4 years old, 66.7% of them being diabetics and were on IPD for an average 3.1 months. The most common indication for IPD was financial sponsorship approval (66.7%). All the tenckhoff catheters were inserted by nephrologist/ trainee where 58% were inserted via seldinger method in the ward. 36.7% of the patients' tenckhoffs had mechanical issues which resorted to drop out. The reported rate of peritonitis was 1 in 23.6 months, and all the 4 patients had the catheter removed. 46.7% of the patients required blood transfusion while on IPD. Eventually, 90% of the patients managed to initiate haemodialysis as long term RRT while the remaining patients were offered palliative care due to poor social support. However only 37% of them manage to initiate HD via AVF. This is probably due to prolonged vascular access creation issues.

CONCLUSIONS:

Our study has demonstrated in-centre IPD is a considerable bridging option for those who require additional time for definite RRT arrangement with acceptable peritonitis rate. Bedside seldinger insertion proves to be useful for emergency start of IPD.

Category: Medical

Session: e-Poster

Topic: Peritoneal Dialysis

Abstract ID: 90-111



DEMOGRAPHICS AND BURDEN OF PERITONEAL DIALYSIS (PD) AMONG PD CAREGIVERS: A SINGLE CENTER SURVEY IN MALAYSIA

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INTRODUCTION AND AIMS:

Assisted PD is increasingly becoming an important modality of renal replacement therapy especially among elderly and physically dependent patients. There are growing numbers of studies evaluating burden in PD patients but studies on burden among PD caregivers are limited. We aim to gauge the demographics of PD caregivers in our center, their burden level and factors contributing to higher caregiver burden.

METHODS:

99 PD caregivers were recruited into this cross sectional study in Hospital Raja Permaisuri Bainun and interviewed. Demographic data was obtained and burden was evaluated with the "Zarit Burden Interview (ZBI)" questionnaire. Data was analysed using SPSS version 26.

RESULTS:

Mean age of caregivers was 46.4 years (standard deviation \pm 13.6 years) and 76% were female. Almost half (48.5%) of caregivers were spouses, followed by children (41.5%). Median duration of PD assistance was 18 months (range 3-120 months). Most caregivers were married (73.7%) and are of Malay ethnicity (69.7%). 66.7% are unemployed or home carers and most earned less than RM1000 a month (62.7%). 73.7% of caregivers were healthy with no comorbidities and 63.6% had completed secondary education. 46.5% reported loss of income due to PD assistance commitments and 31.3% had reported loss of work. 44% of caregivers report mild to moderate burden with the mean Zarit Burden Interview burden score being 22.9 (standard deviation \pm 11.7). Using multiple regression analysis, we identified admissions and infective events in the past year as major risk factors for higher ZBI burden scores (p-value 0.011 and <0.001 respectively).

CONCLUSIONS:

PD caregivers commonly experience significant burden that is often overlooked, especially among caregivers who assisted patients during ward admissions or treatment of PD infections. Hence, burden should be assessed on every PD caregiver routinely and effective measures taken to alleviate it.

Category: Medical

Session: e-Poster

Topic: Peritoneal Dialysis

Abstract ID: 91-112



THE ASSESSMENT OF BURDEN AMONG CAREGIVER OF CHRONIC DIALYSIS PATIENTS : A SINGLE CENTRE STUDY

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INTRODUCTION AND AIMS:

Chronic dialysis inflicts physical, financial and emotional burden to patients and caregivers. We aimed to describe the characteristics of caregivers of chronic dialysis patients, assessed their burden and identified the patient's perceptions on their caregiver burden.

METHODS:

An interview-questionnaire-based, cross-sectional study involving chronic dialysis patients and their caregivers was conducted. Caregivers and patients were interviewed independently. The caregivers completed the caregiving burden scale using the Zarith Burden Index (ZBI) questionnaires and patients completed the Cousineau self-perceived burden questionnaires.

RESULTS:

A total of 250 subjects (125 patients and 125 caregivers) were recruited. The mean age of the caregivers and patients were 46.4 ±13.5 and 56.9±13.4 years respectively. Majority of caregivers were female (62%), spouse (51.2%) and from Malay ethnicity (79.2%). Whilst 55.2% of the patients were male and on haemodialysis (74.4%). The total global burden perceived by caregivers was low with mean ZBI burden score of 19.9±13.6. 71(56.8%) caregivers reported little or no burden, 39(31.2%) mild to moderate burden and 15(12%) moderate to severe burden. Chinese ethnicity showed significant association with caregiver burden ($p = 0.039$). There was no association between age, gender, education, income, duration of care, dialysis modalities or duration of dialysis with caregiver burden. The mean score of patients' Cousineau self-perceived burden questionnaire was 27.8±10.51 with 71% of the patient perceived their caregivers had moderate to severe burden. Female($p = 0.001$), single ($p=0.05$) and working($p=0.008$) patients were more likely to perceive their caregivers were overburdened.

CONCLUSIONS:

There was a low burden among caregivers of patients on maintenance dialysis in this study. Even though not statistically significant, female, younger caregivers with low education and low income showed higher burden trends compared to their respective counterparts. The majority of our chronic dialysis patients perceived their caregiver was burdened by the responsibilities.

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 92-113



CHALLENGES IN TREATMENT : DISSEMINATED MYCOBACTERIUM ABSCESSUS SECONDARY TO CATHETER RELATED BLOODSTREAM INFECTION (CRBSI) IN DIALYSIS POPULATION

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INTRODUCTION AND AIMS:

Rapidly growing mycobacterium such as *Mycobacterium fortuitum*, *M. chelonae* and *M. abscessus* is an increasing threat to dialysis population, contributing to catheter related bloodstream infection (CRBSI) and peritonitis. Treatment often involves catheter removal and prolonged multi antimicrobial therapy. However treatment failure often occurs due to antimicrobial resistance.

METHODS:

We described the case of a 25 years old lady with end stage renal failure secondary to lupus nephritis who acquired disseminated mycobacterium abscessus infection following CRBSI.

RESULTS:

This patient underwent intermittent hemodialysis via left internal jugular catheter (IJC) in our hospital hemodialysis unit. She presented with fluid overload symptoms, diarrhea and palpitation. Blood investigations showed pancytopenia transaminitis and high C reactive protein. Blood culture taken from the periphery grew *Mycobacterium abscessus* while culture from both IJC lumen grew *Mycobacterium fortuitum chelonae*.

Infected IJC was removed and patient was initiated on quadruple regime which consisted of Meropenem, Amikacin, Clarithromycin and Clofazamine. During intensive phase we experienced difficulty in maintaining therapeutic level of amikacin in view of her renal impairment. Patient completed a total of 8 weeks of intensive therapy and achieved culture clearance. However, despite initial clinical improvement, patient developed liver and spleen abscess after 2 months into maintenance phase on Clofazimine and Clarithromycin.

CONCLUSIONS:

We would like to highlight the limitation in current available treatment for *Mycobacterium abscessus*. Its unique antimicrobial resistance, side effects of current available antibiotic choice and long duration of treatment imposed heavy burden to public health. New antimicrobial agents and engineered phage therapy have been studied in vitro as potential therapy however there is lack of clinical trials to study their efficacy in human host. We hope more clinical trials will be conducted to look for better treatment option to combat this disease.

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 93-114



PERCEPTION OF CONTRAST INDUCED NEPHROPATHY AMONG HEALTHCARE WORKERS IN MEDICAL DEPARTMENT HOSPITAL KAJANG: A PILOT STUDY.

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INTRODUCTION AND AIMS:

Contrast induced nephropathy or acute kidney injury has been described since the 1950's and has been extensively studied. However, the knowledge and perception of medical practitioners towards this condition has not been extensively studied. Thus, we have attempted to assess the perception of medical practitioners in a district hospital in Malaysia.

METHODS:

This study was conducted in Hospital Kajang, a district hospital in the state of Selangor, Malaysia from March till April 2021. Consenting medical practitioners in the internal medicine department with a minimum 2 years of experience were included in the study. The study was done with an online questionnaire that consisted of 25 questions designed to assess knowledge, attitudes, awareness, and practice. As this was a pilot study, we did a universal sampling in the Medical Department, which gave us a sample size of 57. Data was then computed into Excel and was analyzed using SPSS version 25.0.

RESULTS:

57% of the respondents were medical officers, with 64.9% of the respondents being in the 30 – 39 years age group. 56.1% had only encountered less than 5% of CIN cases and 68.4% had answered the definition correctly. 52.6% placed the prevalence of CIN between 1-10% while 75.4% answered that peak incidence happens between 1-5 days. More than 50% of respondents identified the risk factors and medications to be stopped correctly. 57.9% of them were aware of a risk calculation tool however 64.9% admitted to not using the tool. More than 50% placed high likelihood for kidney adverse event, that it is a common event, and it is not overestimated.

CONCLUSIONS:

The respondents in our pilot study showed reasonable knowledge with regards to contrast induced nephropathy and placed significant importance to the risk of this condition in their patients.

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 40-115



BURDEN AND DEPRESSION AMONG CAREGIVER OF ADULT CHRONIC DIALYSIS PATIENTS : A SINGLE CENTRE STUDY

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INTRODUCTION AND AIMS:

Chronic dialysis affects physical and psychological aspects of the dialysis patients and their caregivers. We aimed to evaluate the caregiver's burden and the proportion of depression among the caregivers of chronic dialysis patients.

METHODS:

An interview-questionnaire-based, cross-sectional study involving chronic dialysis patients caregivers was conducted. The caregivers completed the caregiving burden scale using the Zarith Burden Index (ZBI) questionnaires and screening of depression symptoms using Patient Health Questions-9 (PHQ-9) questionnaires.

RESULTS:

A total of 125 dialysis caregivers were recruited. The mean age of the caregivers were 46.4 ±13.5years. Majority of caregivers were female (62%), married (51.2%) and from Malay ethnicity (79.2%). 60% of them were employed and 34% had tertiary education. The total global burden perceived by caregivers was low with mean ZBI burden score of 19.9±13.6. 71(56.8%) caregivers reported little or no burden, 39(31.2%) mild to moderate burden and 15(12%) moderate to severe burden. Chinese ethnicity showed significant association with caregiver burden (p = 0.039). There was no association between age, gender, education, income, duration of care, dialysis modalities or duration of dialysis with caregiver burden. The overall level of depression among caregivers was low with a mean PHQ-9 score of 4.62±4.64. 67(53.6%) of caregivers reported 'no to minimal' depression, 43(34.4%) had mild depression and remaining 15(12%) had moderate to severe depressive symptoms. Factors that contributed to depression were female(p=0.05), age < 60 (p=0.035), duration of care < 2 years(p=0.047) and duration of dialysis < 5 years(p=0.024).

Interestingly dialysis modalities, education and employment did not correlate with depression among caregivers.

CONCLUSIONS:

There was a low burden among caregivers of patients on maintenance dialysis in this study but a significant number of them were depressed. Involvement of a multidisciplinary team consisting of nephrologists, psychiatrists and psychologists is prudent to ensure optimum patients' clinical outcomes and improve caregivers quality of lives.

Category: Medical

Session: e-Poster

Topic: Others

Abstract ID: 92-116



AWARENESS OF COVID-19 PREVENTION AND ACCEPTANCE OF COVID-19 VACCINE AMONG HEMODIALYSIS PATIENTS IN SEBERANG PERAI CLUSTER HOSPITAL HEMODIALYSIS CENTRES

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INTRODUCTION AND AIMS:

Covid-19 vaccination is important in fighting Covid-19 among end stage kidney disease patients. We conducted a survey with the goal of assessing the awareness of hemodialysis patients among Cluster Hospital Hemodialysis Units (Seberang Jaya Hospital, Bukit Mertajam Hospital, Sungai Bakap Hospital, and Kepala Batas Hospital) about Covid-19 prevention and assessing the acceptance of the vaccine among hemodialysis patients.

METHODS:

Our study consists of an online questionnaire distributed to all patients during their hemodialysis session to assess their understanding and awareness of how to prevent Covid-19, evaluate their acceptance of the vaccine and address their concerns with regard to the vaccine.

RESULTS:

There are a total of 118 respondents. 93% of the respondents are aware that wearing masks, proper hand hygiene and adequate social distance are fundamental steps in preventing covid 19. Some respondents believe in non-evidence based methods; e.g. doing prayers(16.1%), exercise(9.3%), and taking supplements(6.8%).

Vaccine uncertainty is expressed by 3% of the respondents. The major concern of the respondents about vaccine are safety, sides effects and effectiveness of vaccine(92.2%). Fear of pain and fever post-vaccine are the second major concern(44.8%). Religious factors affect the decision of vaccination in 19.0% of the respondents.

90.7% of respondents enquire covid-19 vaccine information from their doctors and nurses. Social media (57.6%), relatives and family members (54.2%), printing and electronic media (52.5%) and friends(39.8%) are also

important sources of covid-19 vaccine information. 89 % of the respondents prefer to seek advice from doctor and nurse with regard to making decision to take covid-19 vaccine.

CONCLUSIONS:

Majority of our hemodialysis patients are keen on covid-19 vaccination. The high vaccine acceptance might be due to repeated counselling by healthcare workers. Disseminating correct information to patients by healthcare personnel is important as it influences decision of majority of the patients to vaccinate.

Category: Medical

Session: e-Poster

Topic: COVID-19

Abstract ID: 94-117



ACYCLOVIR TOXICITY IN END STAGE KIDNEY DISEASE PATIENT

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INTRODUCTION AND AIMS:

Acyclovir is excreted unchanged in the kidney. Chronic kidney disease (CKD) patients are vulnerable to drug toxicity due to reduced excretion. Its half-life elimination can prolong to > 24 hours in CKD patients. Acyclovir neurotoxicity must be distinguished from herpes encephalitis, as treatments for the 2 disorders are discordant. Patient history, symptom profiles, and lumbar puncture RESULTS: are important to provide reliable differentiation. Hallucinations, death delusions, and involuntary movement are more specific for acyclovir toxicity.

METHODS:

Case report

RESULTS:

78 years old man with a background history of end stage renal disease on regular hemodialysis and chronic hepatitis B infection developed herpes zoster infection. He was prescribed tablet acyclovir 800 mg tds. Shortly 2 days after acyclovir consumption, He was brought to the emergency department due to abnormal behaviour (talking irrelevantly, irritable with visual hallucination). There was no preceding history of fever, headache or neck stiffness. He was intubated due to restlessness with dropping GCS. Preliminary diagnosis of acyclovir neurotoxicity was made.

Ct brain just showed cerebral atrophy. Lumbar puncture was not done in view of presence of severe thrombocytopenia (platelet count 51000/ul). All his septic work-up was negative and he was afebrile at the initial presentation with no nuchal rigidity. Acyclovir was withheld and the patient was put on hemodialysis and subsequently on CVVHDF in view of cardiac arrhythmia. He had intermittent twitching of the limbs throughout his ICU stay. His GCS improved Day 4 after the second episode of hemodialysis. He was extubated on Day 7 of intubation with full GCS after 3 sessions of hemodialysis and 21 hours of CVVHDF.

Treatment of acyclovir-induced neurotoxicity consists of immediate discontinuation of acyclovir and hemodialysis. Due to its low molecular weight and low volume distribution, acyclovir is effectively removed by hemodialysis.

CONCLUSIONS:

Renal impairment demands dosage adjustments of antiviral therapy to prevent potentially fatal drug toxicity.

Category: Medical

Session: e-Poster

Topic: Hemodialysis

Abstract ID: 94-11



ADHERENCE TO INDIVIDUAL MEDICATIONS IN CHRONIC KIDNEY DISEASE PATIENTS: A MULTI-CENTERED STUDY

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INTRODUCTION AND AIMS:

Medication adherence is universally recognized as a major clinical issue in the management of chronic kidney disease (CKD) patients due to complex regimens and high pill burden. It has shown to be associated with better clinical outcomes on disease-associated complications and comorbidities. To date, numerous studies conducted adherence assessment as a whole or focus on only one classification of the drug, which results in difficulty in identifying the individual problematic medication. Hence, this study aims to identify outcomes of assessing medication adherence, overall versus individually, and to identify factors associated with medication therapy.

METHODS:

This is a multi-centered, cross-sectional survey study, conducted in ten government hospitals under the Ministry of Health and Ministry of Education in Malaysia involving adult CKD patients with at least one medication, using a validated questionnaire between June 2018 to June 2019.

RESULTS:

491 patients were included with a mean age of 54.5±14.6 years and mean prescribed medications of 7.0±2.4. Most patients (73.5%) were found at stage 5 CKD. The majority were categorized as adherent (n=404, 82.3%) according to the overall assessment. In contrast, only 27.5% (n=135) were adherent when medications were assessed individually. Patients were mostly adherent to antihypertensive, angiotensin-converting enzyme inhibitors (n= 77, 89.5%). Whereas, they were mainly non-adherent to insulin (n=93, 50%) and phosphate binders (n=189, 48%). Based on individual medication assessment, a multivariate logistic regression demonstrated patients aged >55 years were 2.3 times more

likely to be adherent toward medicines (p=0.001). Those with <3 comorbidities and <7 medications increased the odds of adherence by 2.1 (p=0.002) and 2.2 (p=0.001) times respectively. Having a drug knowledge score >80% increases the odds of adherence by 8.7 times compared to their counterparts (p<0.001).

CONCLUSIONS:

Potential strategies for targeted management should be developed in order to remove barriers towards medication adherence in chronic kidney disease patients.

Category: Paramedic

Session: Oral + e-Poster

Topic: Others

Abstract ID: 7-6



DIETARY INTAKES AMONG RENAL TRANSPLANT RECIPIENTS IN A TERTIARY TEACHING HOSPITAL

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INTRODUCTION AND AIMS:

Dietary intervention is proven to reduce metabolic abnormalities and improve nutritional status among renal transplant recipients (RTRs), however it has not play a prominent role in management of RTRs. Little is known regarding dietary intake among RTRs in Malaysia. This study aimed to appraise the dietary intake among RTRs.

METHODS:

Dietary intake was assessed using a 3-day food record. 24-hour urine collection was collected to estimate daily dietary intake of protein, sodium chloride, potassium and dietary acid load. Anthropometry data was measured. Demographic characteristics, concomitant medications, medical and transplantation history and laboratory results were obtained from electronic medical records.

RESULTS:

A total of 181 stable RTRs were recruited. 77% experienced weight gain after transplantation and 59.2 % with body mass index > 23. Mean energy intake approximated from the 3-day food record was 2085 kcal/day for male and 1685 kcal/day for female. Mean daily intake of protein, sodium chloride, potassium intake and dietary acid load were 63.5 g/day or 1.0 g/kg/day of ideal body weight (IBW), 7.99 g/day, 1.38 g/day and 96.6 mEq/day respectively. 51.9% were found to have inappropriately high protein intake (>1.0 g/kg) with 25% had > 1.2g/kg/day. 82.3 % had sodium chloride intake > 5 g/day. Potassium intake was poor, average vegetable intake only of 1.9 servings/day and fruit 0.9 serving/day.

CONCLUSIONS:

Unhealthy dietary intake was found in majority of RTRs. These results highlight the urgent need for dietary approach as part of the renal allograft preservation strategy.

Category: Paramedic

Session: Oral + e-Poster

Topic: Nutrition

Abstract ID: 20-17

NEW PROTOCOL FOR PERITONEAL DIALYSIS TRAINING PROGRAM

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INTRODUCTION AND AIMS:

The World Health Organisation has declared COVID-19 as a global pandemic on 11th March 2020. Malaysian government announced Movement Control Order on 18th March 2020 as an immediate measure to contain the spread of COVID-19. We initiated home peritoneal dialysis (PD) training program as a measure to minimize hospital visits for new PD patients.

METHODS:

This study aims to describe the new standard of procedure (SOP) for the training program in our center. Dedicated team consisting of doctors and PD nurses are trained regarding this new SOP. All new patients with diagnosis of end stage kidney disease who opted for PD and deemed suitable by treating physician will be recruited after placement of functioning PD catheter. Patient will be assessed by treating physician for fitness for home training program 1-3 days before training. COVID-19 screening questionnaire is mandatory for all patients and assistants. Written consent for PD treatment, home training and photo/video taking are taken. Review of medications, dry weight, training of subcutaneous erythropoietin injection and review of home or essential equipment preparedness is done at the same setting. Authorized trainers go to patients' homes for training. Patient orientation is made via teleconsultation with the hospital team on day-1 training. Training progress is updated by a trainer to the hospital team daily. Standard end training evaluation is done at completion of training. Review post training is done in person at week 1,4 and 12; via teleconsultation at 2,3, 6 and 8.

RESULTS:

99 patients are trained successfully under this program from 30th March till 31st December 2021 with 9 drop-outs.

CONCLUSIONS:

We have managed to fully migrate in-hospital PD training to home-based with great success. Apart from mitigating COVID-19 transmission, a substantial reduction of healthcare cost can be achieved via home-based PD training.

Category: Paramedic

Session: e-Poster

Topic: Peritoneal Dialysis

Abstract ID: 46-49

POTASSIUM DISORDER AMONG RENAL TRANSPLANT RECIPIENTS

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INTRODUCTION AND AIMS:

Electrolyte abnormalities are common complications after kidney transplantation. There is no published data regarding the prevalence of potassium disorder among renal transplant recipients (RTRs) in Malaysia. This study aimed to ascertain the prevalence of potassium disorder among RTRs and the correlation with dietary potassium intake.

METHODS:

This is a cross-sectional study on stable RTRs in a teaching hospital. Dietary potassium was estimated using 24-hour urine collection and serum potassium level were obtained. Demographic characteristics, medication list, medical and transplant history and biochemical profile were obtained from electronic medical records.

RESULTS:

180 RTRs were recruited. 60.6% had eGFR>60mL/min/1.73m², 29.4% had Diabetic and 66.1% had Hypertension. 90% of RTRs were on Calcineurin Inhibitors (CNI), 41.7% on Renin-Angiotensin-Aldosterone System (RAAS) Inhibitors. 3.3% of RTRs were found to require potassium supplement. Mean serum potassium was 4.27±0.45 mmol/L. The prevalence of hypokalemia (defined as < 3.6 mmol/L) and hyperkalemia (defined as > 5.2 mmol/L) was 5 % and 1.1 % respectively. Mean 24-hour urine potassium excretion was 35.2±14.1 mmol/day and the mean estimated dietary potassium intake was 1.38±0.55 g/day which was considered as inadequate (Recommended Nutrient Intake Malaysia 2017 is 4.7g/day). Diabetic is positively correlated with hyperkalemia (r=0.164, p=0.028) but not hypokalemia (p=0.794). Contraindicating with previous report, CNI (p=0.338) and RAAS Inhibitors (p=0.109) were not associated with potassium disorder in this cohort. Dietary potassium was also not correlated with both hypokalemia (p=0.945) and hyperkalemia (p=0.624).

CONCLUSIONS:

Prevalence of potassium disorder was found to be extremely low among RTRs in our center that is contradictory with the prevalence rate reported in the literature. Our RTRs' dietary potassium intake is 3 times lower than recommended. Further study needs to be done to ascertain the impact of dietary potassium intake in RTRs.

Category: Paramedic

Session: Oral + e-Poster

Topic: Transplant

Abstract ID: 20-54



PSYCHOSOCIAL DETERMINANTS OF FATIGUE AMONG NEW HAEMODIALYSIS PATIENTS

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INTRODUCTION AND AIMS:

Although haemodialysis (HD) is utilized as an eminent treatment modality, psychosocial determinants like stress, illness perception, symptom burden, and social support were rarely investigated. This study reported the predictors for fatigue among haemodialysis patients.

METHODS:

The data of baseline phase of a prospective consecutive study was used. All newly haemodialysis-initiated patients, who were in their first three months of treatment at National Hospital, Kandy, Sri Lanka were recruited. Perceived Stress Scale (PSS), Brief Illness Perception Questionnaire (BIPQ), Chronic Kidney Disease Symptom Index- Sri Lanka (CKDSI-SL), Social Support Questionnaire (SSQ6) and Chalder Fatigue Scale (CFS) were administered. Univariate, bivariate and binomial logistic regression was performed.

RESULTS:

There were 141 new haemodialysis patients included in the baseline phase and among them more than two third of study patients presented with at least moderate or high level of stress, illness perception, symptom burden, and fatigue. Among all studied socio-demographic variables only age and multi co-morbidity status showed effect on fatigue. Binary logistic regression was performed to find the effect of variables with $p \leq 0.05$ at univariate analysis. A significant model was generated, $\chi^2(8) = 36.441$, $p < .0005$ with 54.5% of the variance in fatigue. Likelihood ratio for fatigue for multi co-morbidities and other comorbidities were 19.435 and 9.831 respectively. Among psychosocial variables, both domains of illness perception; cognitive and emotional

illness representation showed 1.128 and 1.325 likelihood for being fatigued among fresh haemodialysis patients.

CONCLUSIONS:

New haemodialysis patients are prone to cognitive behavioral alterations not merely due to physical illness, but psychosocial status may be involved significantly. Hence much attention to illness perception is needed when caring for haemodialysis patients to improve their quality of life.

Category: Paramedic

Session: Oral + e-Poster

Topic: Hemodialysis

Abstract ID: 50-55



ADHERENCE TO PERSONAL PROTECTIVE EQUIPMENT GUIDELINES DURING COVID-19 PANDEMIC AMONG HEALTHCARE WORKERS IN HEMODIALYSIS UNIT (HDU), HOSPITAL KUALA LUMPUR (HKL): A CROSS-SECTIONAL SURVEY

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INTRODUCTION AND AIMS:

Coronavirus-19 (COVID-19) is a highly infectious disease with potential for health care workers (HCW) to get infected. In Hospital Kuala Lumpur (HKL) there were 172 patients who presented with acute respiratory syndrome coronavirus (SARS-CoV-2) who required dialysis over a one-year period from February 2020 to February 2021. Unfortunately, out of 280 nephrology HCW who were deployed to handle these patients, 44 (15%) have so far become infected with COVID-19. Effective use of personal protection equipment (PPE) is a key to mitigate the spread of COVID-19. Therefore, a survey on the understanding about COVID-19 and adherence to personal protective equipment (PPE) was conducted among HCW in HDU, HKL.

METHODS:

A google form questionnaire link was sent to all HCWs in HDU, HKL in March 2021. Respondents remained anonymous.

RESULTS:

37 out of 37 HCWs responded to the questionnaire, giving a 100% response rate. Most of the respondents were Assistant Medical Officers, n= 29 (78.4%) followed by Nurses, n= 8 (21.6%). Approximately half i.e., n= 20 (54.1%) had more than 5 years' experience in HD setting, n= 17 (45.9%) had Post Basic Renal Nursing training and n= 25 (67.5%) had attended CME on COVID-19. Majority of respondents n=35 (94.6%) were aware of the department policy to use full PPE when handling patients under investigation, surveillance, and COVID-19 patients. However, a large majority i.e., 92.3% reported poor compliance to use full PPE especially using proper mask KN95/N95. In a further survey to explore this non-adherent behaviour, the main reason cited n= 34

(91.9%) was inconvenience in obtaining the KN95/N95 masks.

CONCLUSIONS:

This survey showed HCWs in HDU HKL had good knowledge on COVID-19 and need for adherence to PPE but there was incongruent knowledge and practice. Regular quality Improvement initiatives are recommended to further reduce the gaps between knowledge and practice in adherence to PPE.

Category: Paramedic

Session: e-Poster

Topic: Others

Abstract ID: 53-56



A REVIEW OF SERUM VANCOMYCIN LEVEL IN CONTINUOUS DOSING OF INTRAPERITONEAL VANCOMYCIN IN PERITONITIS PATIENTS

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INTRODUCTION AND AIMS:

In 2018, continuous intraperitoneal (IP) vancomycin dosing based on International Society for Peritoneal Dialysis (ISPD) Guidelines of 2016 had resulted in suprathreshold serum vancomycin level in 75% of Continuous Ambulatory Peritoneal Dialysis (CAPD) peritonitis patients in our setting. The recommended loading (LD) and maintenance doses (MD) were 30mg/kg and 1.5mg/kg/bag, respectively. Currently, lower dosing regime has been practised with the aim of achieving therapeutic levels and good clinical outcomes.

METHODS:

This descriptive study involved all peritonitis patients in Hospital Sultanah Nur Zahirah receiving continuous dosing of IP vancomycin (LD of 15 – 20mg/kg followed by MD of 1mg/kg/bag) from January 2018 until January 2020. Data were retrieved from the Hospital Information System. Serum vancomycin levels were evaluated according to a therapeutic range of 15 – 20 mcg/ml. Clinical outcomes on response to antibiotic were evaluated according to mean dialysate cell counts and IP vancomycin completion.

RESULTS:

Of 29 patients who received current practice of IP vancomycin dosing, serum vancomycin levels were therapeutic in 58.6% (n=17), subtherapeutic in 20.7% (n=6) and suprathreshold in 20.7% (n=6) with mean serum level of 17.04±0.60, 12.42±0.54 and 25.22±1.05 mcg/ml, respectively. Overall, 72.4% (n=21) completed IP vancomycin treatment, whereas eight patients discontinued IP vancomycin, due to removal of tenckhoff catheter (n=6), fungal culture (n=1) and gram negative culture (n=1). Mean dialysate leukocytes was significantly reduced post

vancomycin treatment (342.46±128.88 vs. 55.27±22.94, p=0.01).

CONCLUSIONS:

The current practised dose holds a good potential for clinical implementation especially in regards to achieving therapeutic serum vancomycin level. In future, a prospective controlled study shall be carried out to support the current practice.

Category: Paramedic

Session: e-Poster

Topic: *Peritoneal Dialysis*

Abstract ID: 58-64



PREVALENCE OF ACUTE KIDNEY INJURY IN NON-CRITICALLY ILL ADULT PATIENTS PRESCRIBED WITH AMINOGLYCOSIDES IN HOSPITAL TENGKU AMPUAN RAHIMAH (HTAR), KLANG, MALAYSIA.

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INTRODUCTION AND AIMS:

The prevalence rate of aminoglycosides-induced AKI ranges from 7% to 12% in various studies. This study was conducted to determine the prevalence of AKI associated with aminoglycoside use in non-critically ill adult patients in HTAR. .

METHODS:

A prospective observational study was conducted from January to June 2019. All hospitalized adult patients who received aminoglycosides for ≥ 3 days were recruited. Paediatrics, stage 5 chronic kidney disease, renal transplant, and intensive care unit patients were excluded. Patients were monitored for occurrence of AKI during aminoglycosides treatment. Pharmacists would suggest to physicians for renal profile (RP) and therapeutic drug monitoring (TDM) if these tests were not ordered.

RESULTS:

A total of 24 patients who fulfilled inclusion criteria were recruited. They were all prescribed with Gentamicin, for 3 to 14 days, with an average of 7.21 days. Gentamicin was mainly prescribed for open wound fracture (19, 79%), followed by infective endocarditis (3, 13%) and sepsis (2, 8%). Seventy percent of patients that were prescribed with aminoglycosides were also on ≥ 1 concomitant nephrotoxic drugs. Most patients (20, 83%) that were on aminoglycosides had their RP ordered pre and 72 hours post aminoglycosides, but 4 (17%) patients were discharged without appropriate RP monitoring. TDM was ordered in 19 (79%) patients. 1 out of 20 patients developed AKI on day 6 Gentamicin, which did not resolve despite discontinuation of

Gentamicin on day 13. The total length of AKI was 28 days and he passed away prior to any dialysis initiation.

CONCLUSIONS:

From our study, the prevalence of AKI associated with aminoglycosides in HTAR is 5%. A low prevalence rate might be contributed by short duration of aminoglycosides treatment in our population and small sample size. There is also a need to raise awareness among prescribers for TDM and RP monitoring during aminoglycosides therapy.

Category: Paramedic

Session: e-Poster

Topic: Others

Abstract ID: 59-66



OUTCOME OF UROKINASE LOCK THERAPY FOR HEMODIALYSIS TUNNELED CATHETER

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INTRODUCTION AND AIMS:

Tunneled cuffed hemodialysis catheters are used in about one third of chronic hemodialysis population. One of the major complications associated with usage of these catheters is thrombosis. Urokinase lock therapy is one of the commonly used thrombolytic agents. However, there are few data on exact protocol administration of urokinase to tackle thrombosis related catheter. The objective of this study is to describe outcome in terms of catheter function post urokinase administration at Day 0 and Day 30 and catheter related bloodstream infection following administration of urokinase at Day 14.

METHODS:

This is a prospective study from 2019 to 2020 of chronic hemodialysis patients on hemodialysis tunneled cuffed catheter admitted for catheter malfunction. Patients that fulfilled the inclusion criteria were recruited in this study. Urokinase lock protocol with 10000 IU (1ml) urokinase and 800-1000 IU (0.8-1.0ml) heparin were used to fill each lumen of catheter and after 1 hour, the lock solutions were removed. This process was repeated a total 3 cycles. At last cycle hemodialysis treatment was performed with a blood flow rate of 180ml/ min.

RESULTS:

A total of 29 patients were recruited in this study. Mean age group was 54.1 (\pm 18.0) years. Twenty two (76%) were male and 7 (24%) were female. All used an internal jugular cuffed catheter. Catheter patency was 100% immediate post urokinase lock protocol. Three patients (10.3%) required repeat urokinase lock therapy at 1 month. Catheter related bloodstream infection at 14 days post urokinase lock was 2/29 (6.9%).

CONCLUSIONS:

This urokinase lock protocol adopted in our centre was efficacious and associated with low complications rate.

Category: Paramedic

Session: Oral + e-Poster

Topic: Hemodialysis

Abstract ID: 62-68



USE OF PHOSPHATE BINDERS IN DIALYSIS PATIENTS IN HOSPITAL RAJA PEREMPUAN ZAINAB II: A SINGLE CENTRE STUDY

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INTRODUCTION AND AIMS:

Calcium-based phosphate binders (PB) are the most widely prescribed PB. However large doses are usually required to achieve adequate phosphate management and often results in hypercalcaemia. Other types of PB with increasing popularity are sevelamer and lanthanum (non-calcium-based). The study aimed to study the phosphate binder use in dialysis patients in HRPZ II.

METHODS:

A retrospective cross sectional study was conducted involving patients on dialysis in HRPZ II receiving phosphate binder with age over 18 years old. Data collection forms were used to record data retrieved from the Department of Nephrology, HRPZ II and electronic medical records. The data was analysed using IBM SPSS version 25.0.

RESULTS:

A total of 71 patients on dialysis receiving PB were included into the study with mean (SD) age of 49.4 (15.17) years and mostly Malay (97.2%). On the types of PB, 37 (52.1%) patients were on calcium-based and 34 (47.9%) were on non-calcium based. Two thirds (60.6%) had diabetes and most (93.0%) had hypertension. The mean (SD) of intact parathyroid hormone level was 332.3 (382.34) pg/ml. The mean adjusted calcium levels (mmol/L) for calcium-based and non-calcium based PB were 2.02 and 2.18 respectively. There was no significant difference in the mean of adjusted calcium level, three levels of phosphate binder (pre, month 3 and month 6) and compliance rate between both types of phosphate binders. The overall compliance rate was 54.9%.

CONCLUSIONS:

This study shows calcium-based PB is still safe to use. However, a few other studies suggested that non-calcium-based shows more benefit especially in reducing the incidence of hypercalcaemia.

Category: Paramedic

Session: Oral + e-Poster

Topic: Hemodialysis

Abstract ID: 68-74



THE EFFECTIVENESS OF NURSE-LED SELF-MANAGEMENT SUPPORT PROGRAM FOR PEOPLE WITH CHRONIC KIDNEY DISEASE STAGE 3-4 (CKD-NLSM): A RANDOMIZED CONTROLLED TRIAL

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INTRODUCTION AND AIMS:

The complexity of chronic kidney disease (CKD) and its treatments have made self-management behaviors inevitably challenging. This study culturally adapted three instruments (Kidney Disease Knowledge Survey [KiKS], CKD Self-Management [CKD-SM] and Self-efficacy for Managing Chronic Disease [SEMCD]), developed, co-designed with patients, and evaluated the effects of the CKD nurse-led self-management support program (CKD-NLSM) in people with CKD stage 3-4.

METHODS:

A parallel randomized controlled trial was conducted in a tertiary hospital in adult participants with CKD stages 3-4, ≥ 18 years old. CKD-NLSM comprises 6-week program in addition to standard usual care, while the control group received standard usual care. Primary outcomes were kidney disease knowledge (KiKS) and CKD self-management behaviour (CKD-SM). Secondary outcomes were self-efficacy (SEMCD), quality of life (KDQOL-36™), blood pressure control and adherence to CKD diet. All outcomes were measured at baseline and 12-week post-baseline. The between- and within-group intervention effects were estimated using the general linear model (two-way repeated measure ANCOVA). The group effects were tested as Time*Group.

RESULTS:

A total of 130 participants consented and randomised to the intervention (n=66) and the control group (n=64). Baseline

characteristics were comparable except education and age. The mean (SD) age was 62.2 (11.95) years (intervention), and 67.42 (10.91) (control). Most participants (66.7%) had CKD stage 3. CKD-NLSM improved knowledge (24.9 versus 14.9, $F=91.89$, $p<0.001$), self-management behaviour (81.0 versus 65.4, $F=41.80$, $p<0.001$), and self-efficacy (45.2 versus 29.7, $F=51.93$, $p<0.001$). Similar within-group improvement was observed, except in KDQOL-36™. There were no significant differences in blood pressure control. Urine tests results are pending.

CONCLUSIONS:

CKD-NLSM is effective in improving kidney-specific knowledge, CKD self-management behaviours and self-efficacy in people with CKD stages 3-4. A larger and longer study is needed to properly examine CKD-NLSM effects on kidney-specific quality of life, kidney functions and progression.

Category: Paramedic

Session: Oral + e-Poster

Topic: Others

Abstract ID: 69-76



THE EFFECTIVENESS OF EDUCATION IN DIALYSIS PREPARATORY CLINIC FOR CHRONIC KIDNEY DISEASE (DPC) PATIENTS STAGE 5 OPTING FOR RENAL REPLACEMENT THERAPY BESIDES HAEMODIALYSIS

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INTRODUCTION AND AIMS:

Renal Replacement Therapy (RRT) is important for patients with Chronic Kidney Disease (CKD) stage 5. Choosing the right treatment is very important to ensure patients and family members are happy with the treatment choice. To ensure patients can make the right choice of the treatment, patient education is very important. Education for patients with CKD must start early for good treatment outcomes.

Objective: To evaluate the effectiveness of education in dialysis preparatory clinic for chronic kidney disease (DPC) patients stage 5 opting for renal replacement therapy besides haemodialysis.

METHODS:

A retrospective study used to obtain from the clinics database and patients records between 2016 until 2020 and was analysed using SPSS version 21

RESULTS:

339 patients were attending DPC from 2016-2020. Results showed 29.7% patients still undecided, 37.1% (PD), 23% (HD), 33% (conservative) and 0.5% (Renal transplant).

CONCLUSIONS:

This study show that the Dialysis Preparatory Clinic program that consist of information about CKD, RRT video, question and answer session regarding treatment option and small group discussion can increase proportion of patients with CKD stage 5 plan to start dialysis either via Peritoneal Dialysis or Haemodialysis. Dialysis Preparatory Clinic education program can provide effective knowledge and help many CKD stage 5 patients for the early and good kidney option for the good outcomes.

Category: Paramedic

Session: e-Poster

Topic: Basic Science

Abstract ID: 72-80



THE ROLE OF FIBRINOLYTIC AGENTS IN PREVENTING RELAPSING AND REPEAT GRAM-NEGATIVE PERITONEAL DIALYSIS-RELATED PERITONITIS

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INTRODUCTION AND AIMS:

Peritonitis caused by *Pseudomonas aeruginosa* and *Serratia marcescens* frequently result in relapsing and repeat peritonitis because of biofilm formation. This study aims to investigate the role of fibrinolytic agents (FA) in preventing relapsing and repeat gram-negative peritoneal dialysis (PD)-related peritonitis.

METHODS:

Outcomes of all *P. aeruginosa* and *S. marcescens* peritonitis diagnosed between 1st January 2020 and 31st January 2021 were reviewed retrospectively. Since 1st September 2020 all cases received 2 doses of 60,000 IU intra-catheter urokinase or 5 mg intra-catheter alteplase in addition to standard antibiotics therapy. Cases diagnosed between 1st January 2020 and 31st August 2020 were used as control.

RESULTS:

During the study period, 35 episodes of *P. aeruginosa* peritonitis were reported in 22 patients. Thirteen episodes (37%) were treated with FA. Cure rate was similar between those who did and did not receive FA (31% vs 32%, $P=0.95$). Two patients (9%) died and 1 patient (5%) was converted to hemodialysis permanently. Seven patients (32%) had Tenckhoff catheter removal and reinsertion, all were able to resume PD. There were 11 episodes of *S. marcescens* peritonitis among 7 patients. Six episodes (55%) were treated with FA. All the 4 patients who did not receive FA had relapse and followed by Tenckhoff catheter removal and reinsertion. All the 3 patients who received urokinase had relapsing/repeat peritonitis. Among 3 patients treated with alteplase, 2 cured and 1 had relapse. All the 5 patients with relapsing/repeat peritonitis resumed PD after Tenckhoff catheter removal and reinsertion. Only 1 patient had blood-stained peritoneal dialysate after receiving alteplase but resolved after 2 days.

CONCLUSIONS:

This study demonstrates that intra-catheter alteplase has potential in preventing relapsing and repeat *S. marcescens* peritonitis. However, fibrinolytics do not seem to be effective in peritonitis caused by *P. aeruginosa*.

Category: Paramedic

Session: e-Poster

Topic: Peritoneal Dialysis

Abstract ID: 75-85



THE ROLE OF INTRAPERITONEAL AMPHOTERICIN B IN PERITONEAL DIALYSIS-RELATED FUNGAL PERITONITIS. TEN-YEAR REVIEW FROM A MALAYSIAN CENTER.

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INTRODUCTION AND AIMS:

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 and intraperitoneal (IP) amphotericin B has been reported to cause chemical peritonitis. This study aims to investigate the role of IP amphotericin B in treating FP.

METHODS:

Outcomes of all FP diagnosed between January 1, 2011 and December 31, 2020 were reviewed retrospectively. Before January 2015, FP cases were treated with intravenous (IV) amphotericin B with/without IP fluconazole; from January 2015 onwards, combination of IV and IP amphotericin B was used as the antifungal regimen.

RESULTS:

During the study period, forty-six FP cases were diagnosed. Yeast was isolated from 80% of the cases with *Candida parapsilosis* (30%) the most frequently detected yeast. On average, Tenckhoff catheter was removed 14 days from the diagnosis of FP. The overall PD resumption rate was 44%, similar among patients who did/did not receive IP amphotericin B (44% vs 43%, $P=1.00$). The technique failure rate after 12 months was similar among those who did/did not receive IP amphotericin B (81% vs 79%, $P=0.83$). Overall mortality was 20%, similar between those who did/did not receive IP amphotericin B (22% vs 14%, $P=0.55$). Mortality was also similar between those who were infected by yeast and mold (19% vs 22%, $P=0.82$) and those who had Tenckhoff catheter removed early (≤ 1 week) and late (>1 week) from the diagnosis of FP (18% vs 21%, $P=0.80$). Mortality was higher among those with serum albumin ≤ 25

g/L (35% vs 8%, $P=0.02$). None suffered from chemical peritonitis with IP amphotericin B.

CONCLUSIONS:

Even though IP amphotericin did not cause chemical peritonitis, it did not seem to improve the outcomes of FP.

Category: Paramedic

Session: Oral + e-Poster

Topic: *Peritoneal Dialysis*

Abstract ID: 75-87



THE EFFECT OF COVID-19 PANDEMIC ON THE HCTM'S PERITONEAL DIALYSIS PROGRAM

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INTRODUCTION AND AIMS:

The coronavirus disease 2019 (COVID-19) pandemic has interrupted medical services including peritoneal dialysis (PD) care delivery. PD is emerging as a safer alternative of RRT to reduce exposure to COVID-19 but the disease effects on PD care delivery is unknown.

METHODS:

We conducted a retrospective study evaluating the PD care delivery in Hospital Canselor Tuanku Muhriz (HCTM), including new referrals, drop-out and peritonitis incidence during the pandemic period from March 2020 until February 2021. The observation was compared with the same data from March 2019 until February 2020.

RESULTS:

A smaller number of patients (n=23) was referred for initiation of PD compared to pre-pandemic period (n=28). Interestingly, despite the operating theater (OT) schedule disruption, the median days for Tenckhoff insertion was lower during the pandemic period, 55 days versus 151 days. We postulated that this is caused by better prioritization in choosing patients at more advanced stage and with higher

likelihood of choosing PD. The main reason for delay in Tenckhoff catheter insertion before the pandemic was contributed mainly by the patient's decision (28.6%) compared to the more frequent surgical related issues during the pandemic time (34.8%). The drop-out from the PD program was lesser during the pandemic period. The highest cause of drop-out during each period was death. There was a lesser incidence of peritonitis during the pandemic where only 7 cases were recorded, compared to 14 in the previous year. The restriction of movement and frequent reminder on hygiene during the pandemic might have contributed to this reduction.

CONCLUSIONS:

The impact of COVID-19 on our PD care delivery was minimal compared to the care delivered in the previous year. This should encourage more uptake of PD as a safer alternative during the pandemic period.

Category: Paramedic

Session: Oral + e-Poster

Topic: Peritoneal Dialysis

Abstract ID: 51-100