JCTN (2019) Volume 1 , S1-123
'Proceedings of the The 4th Congress of Asian Pacific Society of Dialysis Access (APSDA) 2019 in conjunction with The 35th Annual Congress of Malaysian Society of Nephrology (MSN) 2019, Kuala Lumpur, Malaysia, 11th - 14th July 2019'

JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

EVALUATION OF THE EFFECT OF PRESENCE OR ABSENCE OF PEW ON PTA INTERVENTION

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INTRODUCTION AND AIMS:

As an intervention to shunt stenosis in dialysis, there are many opportunities to perform Percutaneous Transluminal Angioplasty (PTA). As an evaluation of nutritional status, opportunities to evaluate malnutrition status with or without Protein-Energy Wasting (PEW) are increasing. This time we investigated and examined the influence on the blood vessel patency rate retrospectively for cases in which PTA and PEW performed at our hospital could be evaluated.

METHODS:

From January 2011 to December 2016, 3019 cases of access-related surgery were performed at our hospital. Among them, 792 cases that PEW could be evaluated in this time. The subject cases were divided into two groups with or without PEW (441 cases without PEW and 351 cases with PEW group) to evaluate how they affect the patency rate.

RESULTS:

In terms of patency rate, the group without PEW tended to be lower than that with PEW group ($P = 0.380$). Univariate analysis revealed a significant difference in gender, age at surgery and primary disease at the time of dialysis introduction on the patient's background ($P < 0.05$).

CONCLUSIONS:

Although there was no effect on vascular patency depending on the presence or absence of PEW, patency rate tended to be lower in the group without PEW.

Session: Poster

Topic: APSDA - Others
Abstract ID: 6

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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract

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A MULTICENTRE STUDY ON INITIAL HEMODIALYSIS ACCESS AND ITS ASSOCIATED OUTCOME

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INTRODUCTION AND AIMS:

An optional vascular access (VA) is essential for adequate hemodialysis (HD). The arteriovenous fistula (AVF) is well regarded as the best access. This study is done to determine the type of VA during initiation of HD in incident End Stage Renal Failure (ESRF) patient and to evaluate the associated outcomes of infection, all cause mortality and hospitalization.

METHODS:

This is a retrospective study which included incident adult ESRF patients of 4 hospitals in State of Pahang Malaysia who were initiated on HD from 1st January to 31st December 2017. Baseline demographics were recorded and the initial HD access was divided into AVF group and central venous catheter (CVC) group. Patients were followed up until end of 2018. The outcome events of infection, all cause hospitalization and mortality were recorded and analysed.

RESULTS:

A total of 160 patients were included in the study in which only 21(13.1%) were in AVF group. In CVC group, 13 (9.4%) patients had AVF creation but were not used due to late creation or primary failure. The median days to first fistula creation in CVC group were 103 ±176. In CVC group, 41(29.5%) of patients developed catheter related blood stream infection (CRBSI). There were 7 (33.3%) all causes hospitalization in AVF group compared to 104 (74.8%) in CVC group ($p < 0.001$) and there was only 1 (4.7%) infection in AVF group compared to 74 (53.2%) in CVC group ($p < 0.001$). There was no difference between the two groups in mortality [1(4.7%) vs 22 (15.9%), $p = 0.315$]

CONCLUSIONS: Initial use of AVF was very low in our study. The use of AVF was associated with better outcome in terms of reduced hospitalization and infection. Survival was comparable most likely due to short duration of study.

Session: Poster

Topic: APSDA - Basic Research in Dialysis Access
Abstract ID: 13

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Abstract Open Access

RISK FACTORS AND UTILITIES OF INTRAOPERATIVE BLOOD FLOW MEASUREMENT OF ARTERIOVENOUS FISTULA (AVF) AS A SURROGATE MARKER FOR PATENCY RATE OF AVF

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INTRODUCTION AND AIMS:

This study was performed to investigate risk factors and utilities of intra-operative blood flow measurement of AVF as a surrogate marker for patency rate of AVF in patients undergoing hemodialysis.

METHODS:

We conducted a single-center, retrospective study. 130 patients who were produced radio-cephalic AVFs for hemodialysis between April 2014 and March 2016 were analyzed. Intraoperative blood flow of AVF was measured with an ultrasonic flowmeter after anastomosis. The associations patency rate of AVFs up to 36 months after surgery and clinical and laboratory parameters including intraoperative blood flow of AVF were evaluated by multivariate logistic regression.

RESULTS:

The patency rates of AVF at 1, 6, 9, 12, 24 and 36 months after surgery were 96.9% (125/129), 91.5% (107/117), 87.6% (99/113), 86.5% (96/111), 79.2% (83/106), and 70.6% (72/102) respectively. Urid acid ($p<0.05$ at 1month), intraoperative blood flow of AVF ($p<0.05$ at 6 months, 9months, 12months, 24months), anastomosis size of AVF ($p<0.05$ at 6 months), and hemoglobin ($p<0.01$ at 6months) were significantly associated with patency rate of AVF.

CONCLUSIONS:

The intraoperative blood flow of AVF may be a significant risk factor of patency of AVF.

Session: Poster

Topic: APSDA - New innovation in Hemodialysis Access
Abstract ID: 30

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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

MANAGEMENT AND CLINICAL OUTCOMES OF HEMODIALYSIS CATHETER-RELATED BLOODSTREAM INFECTIONS IN SULTAN ABDUL HALIM HOSPITAL, KEDAH

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INTRODUCTION AND AIMS:

While hemodialysis (HD) is still widely used in end-stage renal disease (ESRD) patients, its complications, particularly catheter-related bloodstream infections (CRBSIs), remain as a global challenge. This study was performed to evaluate the management and clinical outcomes of CRBSIs in Sultan Abdul Halim Hospital, a secondary general hospital.

METHODS:

All adult (>18 years of age) ESRD patients who were on regular HD and admitted during 1/1/2016 to 31/12/2016 were included. Their information, ranging from demographics, clinical history, HD history, the results of culture and sensitivity (C&S) to clinical outcomes, were obtained from their electronic medical records.

RESULTS:

Of the 140 patients included, the majority were male (63.6%) and had diabetes (74.3%). They had a mean age of 56.8 years (SD: 12.5 years) and a median HD duration of 6 months (IQR: 9 months). Temporarily Internal jugular catheter (74.3%) was the most commonly used catheter. The duration of catheter varied, with a median of 82 days (IQR: 148 days). Their median hospitalization duration was 15 days (IQR: 10 days), with fever (47.9%) as the main reason for hospitalization. Most of them (92.1%) were diagnosed with CRBSIs, more than half (51.2%) of which were recurrent cases. Coagulase-negative staphylococci (8.6%), methicillin-resistant Staphylococcus aureus (6.4%) and Enterobacteriaceae (6.4%) were identified as the most common microorganism. Most of the cases (93.6%) were resolved, with the patients discharged with (35.1%) or without (64.9%) antibiotics. Mortality was 2.1% (n=3).

CONCLUSIONS:

CRBSI was shown to be the major reason for hospitalization among the HD patients using a temporary IJC. Its recurrence was common, even though most of the cases were resolved with the proper clinical management and C&S-guided antibiotic use. Timely fistula access creation would be beneficial. Catheter free period could be an alternative measures to prevent recurrent CRBSI.

Session: Poster

Topic: APSDA - Management of dialysis access related complication
Abstract ID: 20

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Abstract Open Access

OUTCOME OF TENCKHOFF CATHETER INSERTED 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 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 catheter inserted via Seldinger method from August 2018 to March 2019 are included.

RESULTS:

Total of 30 patients have been identified. Mean age 51.5 years; Male 53.3%. All patients were diagnosed to have end stage renal disease (ESRD), with the mean ESRD vintage of 3.3 weeks prior to Tenckhoff catheter insertion. Mean follow up period was 4.6 months. 25 insertions (83.3%) were successful. Reasons of failed insertion were mostly due to resistance when advancing guide wire (4/5, 80%). 13 patients (52%) used this catheter as temporary dialysis access for intermittent peritoneal dialysis, and 12 (48%) used it for long term peritoneal dialysis. Among those with successful insertion (N=25), 2 (8%) had primary dysfunction, while the rest were able to commence their dialysis. Mean break-in period was 8.8 days. In this sub-group (N=23), 2 (8.7%) had blood stained peritoneal effluent; 2 (8.7%) had exit site infection; 5 (21.7%) had peritonitis. All of these complications were managed successfully without catheter removal. No complication of Tenckhoff catheter leakage was noted in this study. However, 4 (17.4%) had migrated Tenckhoff catheter, with mean time to event 7.3 weeks, and in which 3 (75%) resulted in catheter removal. Overall catheter survival is 76%. One mortality occurred due to sepsis but was not related to this procedure.

CONCLUSIONS:

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. This single-centre study with short duration of follow up has its limitations, though outcomes are comparable with a few local and international studies.

Session: Poster

Topic: APSDA - Basic Research in Dialysis Access
Abstract ID: 21

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Abstract Open Access

DOUBLE SUPERIOR VENA CAVA: AN INCIDENTAL FINDING WHILE PLACING LEFT INTERNAL JUGULAR CATHETER

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INTRODUCTION AND AIMS:

Duplication of superior vena cava is a rare anomaly, with the incidence of 0.3% in general population and 10 times higher in prevalence in patient with congenital heart disease. The majority of cases are asymptomatic and diagnosed incidentally by imaging done for another reason.

METHODS:

Case Report

RESULTS:

We present a case of a 38 years old man, with advanced chronic kidney disease approaching end stage renal failure secondary to neurogenic bladder. An insertion of right internal jugular catheter was done for acute haemodialysis, under ultrasound guidance. Cannulation was successful with good flow, however, the guide wire could not be advanced further. It was removed. A left internal jugular catheter was inserted. It was a smooth and successful procedure. Post insertion, x-ray revealed that the tip appeared to be in left atrium. Clinically, patient has no chest pain and was hemodynamically stable. Blood gas taken from left internal jugular catheters lumen showed it was a venous parameter. An urgent CT thorax was performed because we are unsure of the location of the catheters tip. CT thorax revealed that patient has superior vena cava duplication, in which the vessels is noted draining into a structure posterior to the left atrium possible of coronary sinus. Normal right superior vena cava is small in caliber. The catheter was then removed .His echocardiogram was normal and no congenital anomalies detected. He underwent haemodialysis by using femoral catheter while waiting for fistula creation.

CONCLUSIONS:

This venous anomalies, duplication of superior vena cava should be recognized, as they can have significant clinical implications, especially during central venous catheter placement and other invasive interventions. Also, it should alert physicians to seek for possible undiagnosed congenital heart disease. CT thorax is a non-invasive way to diagnose this venous anomalies.

Session: Poster

Topic: APSDA - Management of dialysis access related complication
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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

THE EXPERIENCE OF VASCULAR ACCESS EDUCATION FOR ASIAN COUNTRIES

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INTRODUCTION AND AIMS:

We belong to the NGO Ubiquitous Blood Purification International (UBPI) and support dialytic treatment in developing countries. We also provide technical support of surgical procedures for vascular access (VA) and education of vascular access management as part of our activities.

METHODS:

We visited five countries, Cambodia, Laos, Mongol, Myanmar and Vietnam as UBPI activities from 2014 to the present and provided medical assistance. We have been training physicians from Vietnam, Laos, Cambodia, Indonesia and Nepal as part of JSDT activities since 2016. Based on our experience, current status and issues about overseas support are reviewed.

RESULTS:

We gave lectures on VA surgery and management. In Cambodia and Vietnam, we actually performed surgeries (AVF, AVG, PTA, etc.) to give instructions to local physicians In Mongol, we conducted a hands-on seminar about echo-guided puncture. In trainings in Japan, we gave training of VA surgery.

CONCLUSIONS:

To provide sustainable medical assistance, official and stable counterparts are necessary in supported countries. It was required to form a society of nephrology in some of them. Most basic hardware, medical devices are ready but VA-specific materials are frequently unavailable. Therefore, it is necessary to prepare VA-specific infrastructure, equipment and materials. At present, silk floss, thread specific to vascular anastomosis, blood vessel prosthesis and medical equipment are provided from Japan. Outreach activities of medical technique of vascular access still have many issues but are required by local physicians with high motivation. Therefore, we intend to promote sustainable medical assistance.

Session: Poster

Topic: APSDA - Training and Education for Dialysis Access Management
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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

USEFULNESS OF ULTRASONOGRAPHY FOR VASCULAR ACCESS

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INTRODUCTION AND AIMS:

To evaluate the usefulness of ultrasonography for vascular access management and care

METHODS:

Role of vascular access ultrasonography

- Ultrasonography in vascular access management
- Ultrasonography in puncture support
- Ultrasonography during percutaneous transluminal angioplasty

RESULTS:

- Echocardiographic evaluation of shunts enables morphological and functional assessments; therefore, it is useful in determining the timing of treatment.
- Ultrasonography is useful to confirm vessel distribution and luminal condition at the puncture site. Therefore, ultrasonography guided puncture is useful in reducing the occurrence of puncture-related issues.
- Ultrasonography enables accurate confirmation of the characteristics of stenotic lesions, which is helpful in choosing appropriate treatment devices. It is also useful for evaluation of therapy outcomes.

CONCLUSIONS:

Ultrasonography enables real-time morphological/ functional evaluation. It is a useful procedure in various clinical settings, including vascular access preparation and daily management and care.

Session: Poster

Topic: APSDA - Training and Education for Dialysis Access Management
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Abstract

Open Access

THE CORRELATION BETWEEN ARTERIOVENOUS FISTULA INFLOW WITH BODY MASS INDEX OF HEMODIALYSIS PATIENTS IN HASAN SADIKIN GENERAL HOSPITAL, BANDUNG, INDONESIA

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INTRODUCTION AND AIMS:

Arteriovenous (AV) fistula is the most frequently used blood vessel entrances in chronic hemodialysis patients. In this study, we evaluated the correlation between AV fistula inflow with body mass index (BMI) of hemodialysis patients.

METHODS:

This is a cross sectional study. Fifty-two hemodialysis patients performed a vascular ultrasound examination on the AV fistula, using ultrasound mindray Z5 color doppler. The AV fistula inflow was measured. This is to assess the correlation between AV fistula inflow and BMI, the analysis itself used Spearman rank correlation with $p < 0.05$ is significant.

RESULTS:

In general, the average of AV fistula inflow is 479.6 ml/minute. The correlation coefficient (r) between the AV fistula inflow and BMI was 0.198 (p=0.08). The average of AV fistula inflow according to the BMI category is underweight, normoweight and overweight which is 420.9 ml/minute, 490.6 ml/minute and 506.1 ml/minute, respectively. Descriptively, the greater the BMI, the greater the AV fistula inflow will be, but not statistically significant (p=0.389). The average of AV fistula inflow based on the location of the AV fistula, the lower arm and upper arm respectively 480.3 ml/minute and 458.9 ml/minute (p=0.948), while based on the etiology of renal failure, diabetes and non-diabetes namely 470.7 ml/minute and 479.6 ml/minute (p=0.575).

CONCLUSIONS:

There is no correlation between the AV fistula inflow with BMI of hemodialysis patients. There is also no significant difference between the AV fistula inflow on the BMI category, the location of AV fistula, and the etiology of renal failure.

Session: Poster

Topic: APSDA - Basic Research in Dialysis Access
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Abstract

Open Access

THE EFFECT OF ANTICOAGULATION THERAPY IN MAINTAINING THE PATENCY OF ARTERIOVENOUS ACCESS WITH RECURRENT THROMBOSIS

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INTRODUCTION AND AIMS:

Arteriovenous (AV) access thrombosis account for considerable morbidity and mortality in patients receiving maintenance hemodialysis. We previously demonstrated inferiority in patency rates despite successful salvage of AV access with recurrent thrombosis (within 90 days). This study aims to evaluate the effect of anticoagulation therapy in maintaining the patency of AV access with recurrent thrombosis.

METHODS:

The case records of hemodialysis patients who underwent thrombectomy for recurrent AV access thrombosis (prior thrombosis within 90 days) from 2015 to 2016 were retrospectively reviewed. Immediate and patency outcomes following thrombectomy were compared between patients who received anticoagulation therapy (intervention group) and those who did not (control group).

RESULTS:

During the study period, 70 patients with recurrent AV access thrombosis underwent thrombectomy for clotted access. Of which, 28 (40%) received anticoagulation therapy. Four of these patients were on warfarin while the remaining 24 patients received enoxaparin. Technical and clinical success rates were similar for both groups. One patient developed minor bleeding complication following anticoagulation therapy. Median primary, assisted primary and secondary patencies for intervention vs. control groups were 82 (IQR 41, 196) vs. 27 (IQR 13, 91), p = 0.002; 94 (IQR 41, 259) vs. 38 (16, 169), p=0.020; and 263 (IQR 59, 462) vs. 124 (IQR 30, 400) days, p = 0.134; respectively. Kaplan-Meier analysis demonstrated superior post-thrombectomy primary, assisted primary patency rates in the intervention group (log-rank p = 0.009 and 0.040), although the secondary patency rates were similar (log-rank p=0.109). After adjusting for potential confounders, anticoagulation remained an independent protective predictor of post-thrombectomy primary patency (hazard ratio: 0.57, 95% CI: 0.33-0.98, p=0.04) for AV accesses with recurrent thrombosis.

CONCLUSIONS:

Our results suggested that anticoagulation therapy improves primary patency rates of AV accesses with recurrent thrombosis. This approach may be useful as a bridge to continue dialysis while buying time for new access creation and reduce dependence on dialysis catheter.

Session: Poster

Topic: APSDA - Management of dialysis access related complication
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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

EXAMINATION ABOUT THE FACTOR OF INFLUENCE ON DIALYSIS ACCESS PATENCY RATE AFTER PERCUTANEOUS TRANSLUMINAL ANGIOPLASTY

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INTRODUCTION AND AIMS:

Percutaneous transluminal angioplasty (PTA) is considered to be the first choice for the treatment of vascular access troubles. In many cases, repeated treatment is required, and in some cases, several times within several months. There are few reports on anastomotic differences and prognosis in AVF patients. From the patency rate after PTA, we examined the risk factors for the access anastomosis site(inflow site), and presence or absence of stenosis of cephalic arch and central vein.

METHODS:

In patients who underwent PTA from 2013 to 2018 at 7 centers, patency rates after PTA were investigated and prognostic factors were retrospectively examined from medical records. The factors influencing primary patency were analyzed using Cox proportional hazards model.

RESULTS:

In AVF patients, there were significant differences in hazard ratio in gender, presence or absence of diabetes, location of anastomosis, duration of access preparation to PTA, and blood flow after PTA.

CONCLUSIONS:

The first choice for vascular access was AVF, and placing an anastomotic site on the peripheral side was considered to have a better prognosis for access.

Session: Poster

Topic: APSDA - Management of dialysis access related complication
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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract

Open Access

OPTIMAL IMPLANTATION TECHNIQUE OF RAPIDAX II (EARLY-PUNCTURE-TYPE AND MIDDLE THICKNESS WALL E-PTFE ARTIFICIAL BLOOD VESSEL)

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INTRODUCTION AND AIMS:

The e-PTFE artificial blood vessels (e-PTFE for short) are considered to have a good patency rate, but there is the post-operative edema. Many early-punctureable e-PTFE grafts are too thick and unsuitable for our Asians. We use five kinds of artificial blood vessels properly in our hospital. Rapidax II, a self-sealing e-PTFE vascular prosthesis, was launched by Vascutek Limited(UK) in 2011 in Europe and in 2017 in Japan, but not in Malaysia. Last year, we used this artificial blood vessel in 2 cases.

METHODS:

Rapidax II has a standard e-PTFE structure at both 5 cm ends. The 30 cm long-mid-portion punctured area is a self-sealing multilayer structure. There is much difference in the rigidity of these two structures, and it is necessary to devise at the time of implantation. Loop type implantation was performed using sheath type tunneler. Curve and straight implantation designs are important in Rapidax II. We determined both anastomosis sites by ultrasonic echo examination before surgery.Check the needed length of artificial blood vessel by using a calibrated Nelaton tube. After wash, disinfect, dry, we detached arterial and venous for anastomosis. Place an artificial blood vessel on the skin in sterile condition and determine 3 or 4 relay wound positions. Set up artificial blood vessels by sheath type tunneler. Anastomosing vein and artery to the arteriovenous grafts. We measured maximum diameter of the implanted arm, daily.

RESULTS:

Rapidax II has hard multilayer in the prickable part, and it is only 1mm wall thickness. But it is necessary 5 to 6 small wounds to implant more properly. The edema after surgery still be mild and that peaked on the 4th postoperative day and puncture was possible from the 6th day.

CONCLUSIONS:

Rapidax II has high rigidity, but the wall thickness still be middle regardless of early puncture type e-PTFE.

Session: Poster

Topic: APSDA - Others
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Abstract

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CLINICAL PREDICTORS OF OOUTCOMES AFTER PERCUTANEOUS FISTULOPLASTY OF NATIVE ARTERIOVENOUS FISTULA: SARAWAK SINGLE CENTRE EXPERIENCE

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INTRODUCTION AND AIMS:

Vascular access stenosis can result in various complications including poor access maturation, access thrombosis, and inadequate dialysis. Percutaneous fistuloplasty can be an effective and timely treatment for this problem, thereby reducing patients morbidity. However, clinical predictors of its success and long term outcome need to be determined.

METHODS:

This is a retrospective cohort analysis of all adult haemodialysis patients who underwent AV fistuloplasty from 1st January 2012 to 31st December 2013 in our centre. Patients demographic data, comorbidities, outcomes of intervention and patency of AVF post fistuloplasty were collected from patients haemodialysis records until 1 November 2018. Results were analysed using SPSS version 22.

RESULTS:

A total of 151 fistuloplasties were done during the study period. This cohort has equal gender distribution and the mean age was 62.0 + 11.8 years. Clinical indications for fistuloplasty included poor blood flow rate (60.9%), primary non maturation (28.5%), and others while the main cause of suboptimal function of the AVF was juxta-anastomotic stenosis (57.6%), followed by venous limb stenosis (11.9%) and thrombosis (4%).

Immediate clinical success rate which was defined as the ability to perform HD immediately after percutaneous fistuloplasty was 78.1%. More than 50% of the AVF lasted for more than 24 months after the fistuloplasty. Diabetes mellitus, site of AVF, severity of vessel calcification and length of stenosis were statistically significant in determining the outcome. There were no serious complications.

CONCLUSIONS: Fistuloplasty is a safe and effective method for treating stenosis in poorly functioning AVF. It can restore or improve flow allowing the AVF to be used immediately and hence avoiding the need for central venous catheters. Diabetes mellitus, site of AVF, severity of vessel calcification and length of stenosis are important clinical predictors that determine the success and longevity of AVF post fistuloplasty

Session: Poster

Topic: APSDA - Management of dialysis access related complication
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Abstract Open Access

PACLITAXEL-COATED BALLOON TO PREVENT RESTENOSIS AFTER INITIAL ANGIOPLASTY IN FAILING ARTERIOVENOUS FISTULAS: PRIMARY RESULTS FOR A RANDOMIZED CONTROLLED TRIAL

[1] Yin Yanqi, [2] Shi Yaxue, [3] Cui Tianlei, [4] Li Hua, [5] Chen Jianghua, [6] Zhang Lihong, [7] Yu Zhengya, [8] Li Hong, [9] Yan Yan, [10] Wu Kun, [1] Jin Qizhuang

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INTRODUCTION AND AIMS:

Restenosis characterized by intimal hyperplasia is the main course of patency loss after initial angioplasty for dysfunctional fistulas. Although previous studies have shown potential benefit of paclitaxel-coated balloons in reducing the incidence of restenosis after initial angioplasty, there is lack of precise data from prospective randomized controlled trials to confirm paclitaxel-coated balloons efficacy and safety in fistula stenoses treatment.

METHODS:

We recruited 160 patients with dysfunctional arteriovenous fistulas from 10 centers in China. Grafts, stents, anastomosis or central venous stenoses and immature fistulas were excluded. Patients would be divided into either paclitaxel-coated balloon group or control group by block randomization. During one-year follow-up, restenosis was defined as peak systolic velocity ratio of target lesion higher than 2.0 examined by color-doppler ultrasound. Secondary end points included assessment of target lesion primary and secondary patency. The safety assessment was done within 30 days of the procedure.

RESULTS:

At 6-months follow-up, restenosis of target lesion was significantly lower in paclitaxel-coated balloon group than control group (34% versus 62%, P<0.001), representing a difference of 28% (95% confidence interval, 12% to 42%). Although target lesion primary patency did not meet statistic difference (72% ± 5% for paclitaxel-coated balloon group and 57%±5% for control group, P=0.06), eighty percent patients in paclitaxel-coated balloon group could maintain fistula patency over 262 days and only 172 days with the same patency rate in control group (HR: 1.643, 95% confidence interval, 0.98 to 2.76). Target lesion secondary patency was significantly higher in paclitaxel-coated balloon group than the control group (90% ± 5% versus 77% ± 5%, P=0.038). The primary safety noninferiority end point was met and didn't differ between groups.

CONCLUSIONS:

Paclitaxel-coated balloonassisted angioplasty showed superiority to plain balloon angioplasty in prevention of target lesion restenosis and maintaining fistula patency. Both arms showed equivalent primary safety.

Session: Poster

Topic: APSDA - Management of dialysis access related complication
Abstract ID: 93

JCTN (2019) Volume 1 , S1-123

JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

LESSON LEARNT: A TALE OF 3 MALPOSITIONED CATHETERS

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INTRODUCTION AND AIMS:

Catheter malposition is a known complication of internal jugular catheter(IJC) insertion, with reported rates of up to 5%. We report 3 cases of malposition catheters, its management, and outcome.

METHODS:

-

RESULTS:

Mr M, chronic kidney disease(CKD), planned for haemodialysis. He experienced chest pain after right IJC insertion. Aspiration of lumens showed haemoserous fluid. Chest x-ray revealed catheter tip displaced to right hemithorax. His vital signs were stable. The catheter was examined under fluoroscopy guidewire inserted and noted that it tracked into the right hemithorax. The catheter was removed on-table. Within minutes, the patient developed cardiorespiratory compromise and asystole. Family members refused for post mortem examination. Bedside USG showed no pericardial/pleural effusion. It was postulated that the procedure induced occult bleeding.

Mrs K has CKD on regular haemodialysis. She was referred for failed fistula. Right IJC was inserted as temporary vascular assess. Noted there was no outflow from both lumen. The catheter was kept in-situ while arranging for radiographic investigations. Chest x-ray revealed malposition of catheter at right lung. CT Thorax confirmed the findings. The catheter was removed few days later uneventfully.

Mr R is on regular haemodialysis. He was referred for failed fistula and experienced chest pain after insertion of a right IJC. Aspiration of both lumen showed venous blood. Catheter was left in situ. CT thorax showed tip of catheter at the fat space posterior to pulmonary artery and lateral to oesophagus. He was referred to cardiothoracic surgery, a thoracotomy was done, and the catheter was removed intraoperatively.

CONCLUSIONS:

Catheter malposition is a known and relatively common complication of dialysis catheter insertion. When there is suspicion that a catheter is misplaced, further consideration must be done prior to removal of catheter. If in doubt, dont take it out!

Session: Poster

Topic: APSDA - Management of dialysis access related complication
Abstract ID: 95

JCTN (2019) Volume 1 , S1-123

JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

DOUBLE SUPERIOR VENA CAVA: A RARE ENTITY

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INTRODUCTION AND AIMS:

Congenital anomalies of the great thoracic veins are usually asymptomatic and it can be incidentally discovered in the normal adult. Duplication of superior vena cava (SVC) is a rare abnormality, but the most common thoracic venous congenital anomaly.

METHODS:

A case report in chronological order based on retrospective review of the patient's case notes and radiological reports.

RESULTS:

50 years old lady with ESRF secondary to long standing DM and hypertension who started on regular dialysis 2 years ago via right cuffed IJC. She had exhausted vascular access and not a suitable candidate for PD. She was admitted for MSSA CRBSI with metastatic infection. Right cuffed IJC was removed and she received appropriate antibiotics. We failed to re-insert right IJC because of small vein and thus left IJC was inserted. CXR post insertion showed malposition of left IJC. Urgent CT angiogram neck & thorax revealed incidental findings of SVC duplication. The left sided SVC is draining into the coronary sinus. The proximal part of catheter is within the left internal jugular vein and the distal tip seen in the distal part of SVC. Patient underwent haemodialysis uneventfully via left IJC.

CONCLUSIONS:

The incidence of double SVC in general population is 0.3%, and 10-11% in patients with congenital heart disease. It results from the failure of the left anterior cardinal vein to degenerate during embryological development. Congenital anomalies of SVC are generally discovered incidentally during CVC insertion, pacemaker placement, and cardiopulmonary bypass surgery. The presence of persistent left SVC may cause difficulties or possible complications during access to the right atrium, especially with a left internal jugular and a left subclavian approach, which are common sites of access for haemodialysis catheter or pacemaker placement. Serious complications such as angina, cardiac arrhythmia, shock, and even cardiac arrest have been described.

Session: Poster

Topic: APSDA - Management of dialysis access related complication
Abstract ID: 98

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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract

Open Access

OUTCOMES OF CATHETER RELATED BLOOD STREAM INFECTIONS (CRBSI) AMONG HAEMODIALYSIS PATIENTS IN KLANG VALLEY HOSPITALS

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INTRODUCTION AND AIMS: Arteriovenous fistula(AVF) should be the first choice of vascular access for chronic haemodialysis(HD). However, in Malaysia, majority patients are referred late and end up with central venous catheter for HD. Patients with catheter have increased risk of hospitalization for catheter related blood stream infections(CRBSI).

METHODS:

An observational prospective study was conducted in 8 tertiary hospitals in Klang Valley to assess the disease burden and outcomes of CRBSI. All admissions for CRBSI were recorded including patients' socio-demographic data, co-morbidities, catheter types, culture results and outcomes. Data from 1 May to 31 July 2018 was analysed using SPSS Version-22.

RESULTS:

During the 3-months period, there were 298 cases of CRBSI from 8 hospitals. Mean age was 56.9±12.1 years and 52.7% were male. Majority(76.5%) had diabetes. Most(61.1%) of the catheter were non-cuffed jugular catheters, while 24.5% was tunnelled cuffed jugular catheters. The remainders were non-cuffed femoral, tunnelled cuffed femoral and subclavian catheters. Indication for catheter insertion was mainly due to AVF problems(71.1%). From the culture results, 44.6% was gram-positive while 16% was gram-negative organism. Fungal infections consisted of 0.7% of all CRBSI. Methicillin-Susceptible Staphylococcus Aureus(MSSA) remained the most common organism(19.9%). Eleven(3.7%) patients ended up with intensive care unit(ICU) stay while 16(5.4%) patients in our cohort died. There were 3.3% of complicated CRBSI whereby 1.4% had endocarditis, 0.3% spine infections and 1.7% metastatic abscesses. Thirty-five percent of catheters were changed, 41.1% removed while 21.9% was salvaged.

CONCLUSIONS: There is still high number of hospitalizations, complications and mortality from CRBSI. More efforts are needed to reduce CRBSI by ensuring adherence to universal precaution and proper catheter care. We propose a quality initiative workshop entailing Centres for Disease Control Core Intervention to reduce CRBSI rate in Malaysia. Further data analysis will be done after the workshops to evaluate the effectiveness of this initiative.

Session: Poster

Topic: APSDA - Basic Research in Dialysis Access
Abstract ID: 103

JCTN (2019) Volume 1 , S1-123

JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract

Open Access

CORRELATION OF PARATHYROID HORMONE WITH CAROTID INTIMA MEDIA THICKNESS IN PATIENTS WITH CHRONIC KIDNEY DISEASE UNDERGOING HAEMODIALYSIS

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INTRODUCTION AND AIMS:

Carotid intima-media thickness (CIMT) has been introduced as a cardiovascular disease predictor which may increase in hamodialysis patients. As there are many risk factors in the uremic state that theoretically lead to increase in CIMT, this study was aimed to determine risk factors of CIMT increase in a group of hemodialysis patients included parathyroid hormone.

METHODS:

31 hemodialysis patients underwent ultrasonography for measurement of CIMT. Correlation of demographic, clinical, and laboratory factors with CIMT was studied. Carotid intima-media thickness was measured by one cardiologist in the bilateral common carotid artery.

RESULTS:

The mean CIMT was significantly higher in men compared to women on dialysis. There was a positive correlation between CIMT and age. No correlation was found between CIMT and other studied variables included parathyroid hormone.

CONCLUSIONS:

Carotid intima-media thickness mainly affected by traditional cardiovascular risk factors and uremic risk factors did not specifically affect CIMT

Session: Poster

Topic: APSDA - Others
Abstract ID: 117

JCTN (2019) Volume 1 , S1-123

JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

A SINGLE CENTRE EXPERIENCE ON MEDICAL PERTIONEAL DIALYSIS CATHETER INSERTION AND ITS ASSOCIATED OUTCOMES

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INTRODUCTION AND AIMS:

The technique of Medical Peritoneal Dialysis (PD) catheter insertion is one of the options for PD access. However, there is currently lack of data on its outcomes.

METHODS:

This is a retrospective study done to determine the short term outcomes of Medical PD insertion in Hospital Tengku Ampuan Afzan (HTAA) Kuantan Pahang, Malaysia. All ESRF patients with medical PD catheter insertion between 1st Jan 2017 and 31st March 2019 were included and followed up for 1 month post insertion. Baseline demographic was recorded. Outcomes of catheter malfunctioning, leakage, bleeding, intra abdominal injury, peritonitis and death were recorded.

RESULTS:

A total of 50 medical PD catheters were inserted in our centre during the study period. This constitutes 27% of all PD catheters inserted during the same period. There were 4 (8%) cases of unsuccessful insertions in which all were due to body habitus and occurred during early period of introduction of this technique here. There were 9(18%) cases of malfunctioning catheters, 0(0%) leakage, 9(18%) minor bleeding (blood stained PD fluid), 1(2%) intraabdominal injury and 6(12%) peritonitis. There was no death in our study.

CONCLUSIONS:

The rate of successful medical PD catheter insertion is high in our study with minimal complications. The most common complications were malfunctioning catheters and minor bleeding. This is comparable with other techniques of PD catheter insertions. Future studies should look at overall long term outcomes of peritonitis, catheter malfunction and death in comparison to peritoneoscopic PD catheter insertion.

Session: Poster

Topic: APSDA - New innovation in Peritoneal Dialysis Access
Abstract ID: 119

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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract

Open Access

BUTTONHOLE CANNULATION IN OUTPATIENT HEMODIALYSIS UNIT: 5 YEARS EXPERIENCE

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INTRODUCTION AND AIMS:

The traditional rope ladder(RL) puncture technique, with cannulation along the whole length of the arteriovenous fistula (AVF) is the most common technique used in Malaysia. The alternative needling method is the buttonhole(BH) technique which uses the same location, angle, depth repeatedly using blunt needle and purportedly to minimize vessels damage.

METHODS:

This is a retrospective observational study involving haemodialysis patients at Selayang Hospital and its satellite unit at Sungai Buloh Hospital over 5 years period. Data on pain score, aneurysmal formation, stenosis and localised infection of AVF were collected. Needling pain was assessed on a 10 point visual rating scale on which no pain was represented by a score of 1, to terrible pain which was represented by a score of 10. The inclusion criteria were patient ability to comprehend the study instruction and consented to participate.

RESULTS:

A total of 79 eligible patients were identified. 40 patients (50.6%) were dialysing using BH cannulation whereas 38 patients (49.4%) were using RL method. The mean age was 52.0 14.7, and predominated by male (59.5%). 72.7% (57) had hypertension and 36.7% (29) were diabetics. The BH group had a significant lower pain score compared to the rope ladder group with 1.1 and 1.46 score ($P<0.05$).
The buttonhole group had a higher incidence of infection (7.5% vs 5.1%) but did not reach statistical significance. ($P= 0.665$).

The prevalence of aneurysmal AVF changes for the BH and RL was 17.5% vs 52.8% respectively ($p <0.05$).
The prevalence of fistula stenosis was 5% for BH and 15.4% for RL cannulation which was not statistically significant. ($p=0.154$)

CONCLUSIONS:

Patient with BH cannulation technique had significant lower pain score with less prevalence of aneurysmal changes. Buttonhole cannulation can be recommended as alternative to RL cannulation.

Session: Poster

Topic: APSDA - Basic Research in Dialysis Access
Abstract ID: 123

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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

CORRELATION OF OBESITY AND GLOMERULAR FILTRATION RATE INI MUHAMMADIYAH HOSPITAL PALEMBANG

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[1] Muhammadiyah hospital Palembang
[2] Mohammad Hoesin Hospital Palembang

INTRODUCTION AND AIMS:

Glomerular filtration rate is the volume of plasma which can be completely cleaned of certain compounds by the kidney in one unit of time. GFR has been widely accepted as the best index for assessing kidney function. The glomerular filtration rate can be estimated by measuring serum creatinine levels from suspected patients and / or having risk factors for impaired renal function. One of the causes that can affect the value of GFR is obesity. Obesity can reduce a person's LFG with a mechanism, one of the mechanism is an increase in angiotensin levels which causes a decrease in kidney function and damage. This study aims to determine the correlation of obesity with Glomerular Filtration Rate at Muhammadiyah Palembang Hospital.

METHODS:

The type of this research was observational analytic with cross sectional design using primary data from internal medicine patients in Muhammadiyah Palembang Hospital with a sample of 35 people who had met the inclusion and exclusion criteria.

RESULTS:

The results of statistical tests using the Pearson correlation test found the correlation of obesity with glomerular filtration rate in the Muhammadiyah Palembang Hospital with p-value 0,000 and r = -0,692

CONCLUSIONS:

There is a strong negative correlation between obesity and glomerular filtration rate at Muhammadiyah Hospital Palembang.

Session: Poster

Topic: APSDA - Others
Abstract ID: 142

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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract

Open Access

TENCKHOFF CATHETER INSERTION BY SELDINGER METHOD: A SINGLE CENTRE EXPERIENCE

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INTRODUCTION AND AIMS:

In Sabah, inaccessibility and poor socioeconomic status remains a major obstacle to a better health care delivery. We started Tenckhoff catheter (TC) insertion by Seldinger method in Sabah to increase the accessibility of renal replacement therapy (RRT).

METHODS:

This is a prospective observational cohort study from Queen Elizabeth Hospital, involving end stage renal disease (ESRD) patients who opted for PD. Patients were recruited over 3 months and observed over 1 year for procedural complications and catheter survival. Patients with previous abdominal surgery were excluded.

RESULTS:

12 patients were recruited, the mean age was 44.8 (12.58). 8 (66.7%) were females. 9 (75%) were crash-landers whereas 3 (25%) patients had their dialysis and catheter insertion planned. Causes for ESRD were hypertension (58.3%), diabetes mellitus (33.3%) and unknown (41.7%). Waiting time for insertion was < a week in 9 (75%) and 1-2 weeks in 3 (25%). Majority of the procedures were done in < 60 minutes (10 patients). In 2 patients the duration was between 60 to 90 minutes. 11 (91.7%) had no complication and 1 (8.3%) had a bloody effluent. Training was started within 14 days for 4 (33.3%), 14-21 days for 7 (58.3%) and after 21 days for 1 (8.3%) patients. Early complications (within 1 month) include bleeding from exit site in 1 (8.3%) and exit site infection in 1 (8.3%) . At 3-6 months post insertion, 1 passed away due to an unrelated cause. Complications reported at 6 months to 1 year include exit site infection in 3 (25%), peritonitis in 1 (8.3%) and TC removal in 1 (8.3%). Peritonitis rate was 0.007 episode per year.

CONCLUSIONS:

Tenckhoff Catheter insertion by Seldinger method is a non-inferior technique as the complications and catheter survival is comparable to other techniques.

Session: Poster

Topic: APSDA - Basic Research in Dialysis Access
Abstract ID: 145

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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

COMPARISON OUTCOME OF CONVERSION FROM PERITONEAL DIALYSIS TO HEMODIALYSIS AND FROM HEMODIALYSIS TO PERITONEAL DIALYSIS IN A SINGLE CENTRE IN NORTHERN MALAYSIA

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INTRODUCTION AND AIMS:

At present, haemodialysis (HD) or peritoneal dialysis (PD) is the mainstay of treatment for end-stage renal failure (ESRD) patients. Along the way, a portion of them would have to switch from one modality to the other due to various reasons. This study is to evaluate the outcome of them after conversion from either PD to HD or from HD to PD in a single centre experience in Northern Malaysia.

METHODS:

All patients who were converted either from PD to HD (group A) or from HD to PD (group B) between 01/12/2015 till 31/12/2017 were included and were follow up till 31/12/2018. Demographic information, dialysis vintage, comorbidities, reason of conversion and outcomes were obtained from their medical records.

RESULTS:

Group A had a total of 30 patients with 29 patients' data analysed (1 lost contact). Mean age was 48.2 years. The mean dialysis vintage before conversion was 30.4 months. The main cause for conversion was due to peritonitis (82.8%). Hypertension (63.6%) and diabetes mellitus (40.9%) were among the comorbidities. Survival rate was 79.3% by 31/12/2018. 6 patients passed away post conversion during follow up.

Group B had total 59 patients with mean age of 60.6 years. The mean dialysis vintage before conversion was 40.4 months. The major comorbidities were hypertension (89.8%) and diabetes (61%). The main reason for conversion was merely exhausted vascular access. Survival rate was 44.1% (n=26) by 31/12/2018 with a median survival time 15.4 months following conversion.

CONCLUSIONS:

Group A patients had better survival after conversion compared to group B. This could be explained by PD patients had the benefit of maintaining their residual renal function longer compared to HD. Group A was also of younger age compared to group B and has shorter initial dialysis modality before conversion.

Session: Poster

Topic: APSDA - Management of dialysis access related complication
Abstract ID: 155

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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract

Open Access

EFFECTS OF FAR INFRARED THERAPY ON VASCULAR ACCESS BLOOD FLOW AND NEEDLING PAIN IN HEMODIALYSIS PATIENTS.

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INTRODUCTION AND AIMS:

A well functioning vascular access and minimal needling pain are essential for achieving uneventful hemodialysis (HD) and improving quality of life in patients treated with long term hemodialysis. Far infrared (FIR) therapy, a convenient and non-invasive technology reported improve access blood flow with a reduction of vascular access malfunction in hemodialysis patients. This study aimed to evaluate the effects of FIR therapy on vascular access flow and needling pain in HD patients.

METHODS:

This was a multicenter, randomised controlled trial over 2 months. All enrolled patients were maintained with 4 hours of dialysis 3 times/week. FIR therapy using FIRAPY (Far-infrared Therapy Unit) model TY-102F was performed 40 minutes during each HD session. Vascular access flow measured at baseline, 30 and 60 days after therapy. Needling pain was measured with a numeric rating scale at baseline and 30 and 60 days after.

RESULTS:

We enrolled 13 patients for FIR therapy (mean age 63 ± 10.24 years; 38.5% male) and other 13 patients (mean age 55.6 ± 17.52 years; 38.5% female) as controlled. Median HD vintage 64 (36) months vs 53 (102) months for FIR therapy and controlled group respectively. FIR therapy significantly improved the needling pain score from 2 to 0 after 2 months of therapy ($p = 0.004$). FIR therapy improved vascular access flow from baseline 640.8 ± 113.98 ml/min to 710. 8 ± 197.55 ml/min after 2 months of FIR therapy. However, it is statistically not significant ($p = 0.075$).

CONCLUSIONS:

FIR therapy improved needling pain. Although FIR therapy improved vascular access flow after 2 months but statistically it is not significant. A larger and longer duration of study is needed to evaluate the effect of FIR therapy.

Session: Poster

Topic: APSDA - New innovation in Hemodialysis Access
Abstract ID: 158

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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

INCIDENCE OF TUNNELLED CUFFED CATHETER-RELATED COMPLICATIONS IN FIRST THREE MONTHS AT A TERTIARY CENTRE IN KUALA TERENGGANU

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INTRODUCTION AND AIMS:

Haemodialysis catheter is the commonest vascular access at haemodialysis initiation in this region and tunneled cuffed catheter (TCC) is inserted when patients had ran out of vascular access options. The common complications related to tunnelled cuffed catheter insertion include infections, catheter dysfunction, central venous stenosis, catheter dislodgement and haemo-pneumothorax. This study aims to describe the incidence of tunnelled cuffed catheter insertion and its related complications in a tertiary centre in Kuala Terengganu.

METHODS:

All patients with tunnelled cuffed catheter inserted at nephrology daycare centre, from July 2018 to December 2018 at Hospital Sultanah Nur Zahirah were included in this study. Patients medical record was reviewed, from the day of insertion until first three months or when complications occur. Patients biodata, underlying comorbidities and outcome were recorded. Patients who had non-cuffed catheter insertion, insertion at wards or intensive care units were excluded. Data is entered and analyzed using SPSS Ver 23.0.

RESULTS:

From July to December 2018, there were 56 TCC inserted at nephrology daycare centre in Hospital Sultanah Nur Zahirah. Youngest patient was 22 years old while oldest patient was 81 years old. 58.5% patients are from government haemodialysis centre (hospital or satellite centres). Most TCC were inserted at the right internal jugular vein (50.9%) and was followed by left internal jugular (22.6%), right femoral (13.2%) and left femoral (13.2%). Out of the total TCC, 45.3% was converted from pre-existing non-cuffed haemodialysis catheter while 17% were new TCC insertion. 20.8% patients developed catheter dysfunction (poor flow or no flow) that required catheter change. 18.9% patient developed infections. 3.8% needed catheter adjustment due to malposition.

CONCLUSIONS:

Catheter-related complications are not uncommon particularly catheter dysfunction and infections. Data provided in this study could be applied to improve patients care and long term outcome.

Session: Poster

Topic: APSDA - Management of dialysis access related complication
Abstract ID: 163

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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

A LOCAL MICROBIOLOGY PROFILE OF CATHETER RELATED BLOODSTREAM INFECTION

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INTRODUCTION AND AIMS:

Treatment of catheter-related bloodstream infection (CRBSI) is based on standardized guidelines with emphasis on local microbiological profile. There is currently no comprehensive local profile for such purpose.

METHODS:

All suspected CRBSI admissions from April 2017 till April 2018 were collected prospectively and data was analysed. Case definition of CRBSI is based on clinical judgment of primary physician. No other source of infection could be accounted for the admissions. Non-treating nephrologists reviewed all cases independently.

RESULTS:

There were a total of 161 cases admitted for CRSBI of which 79% were non-cuffed catheters. 2/3 of the cases never had dialysis via a native fistula before. Gram positive accounted for 60% of the infections, Gram negative 31%, fungi 3% and 6% had no growth. Methicillin-resistant Staph aureus is the most common Gram positive organism cultured (39/97 cases) followed by Methicillin-sensitive Staph aureus (23/97 cases) and Methicillin-resistant Coagulase Negative (13/97). Amongst the Gram negative, Klebsiella pneumonia was the most common (14/49 cases), followed by Acetinobacter sp and Entercoccus fecalis (9/49 each). Pseudomonas sp accounted for only 5/49 cases. There was one case of Vancomycin Resistant Enterococcus. 16.3% of the Gram negative organisms were extended spectrum Beta Lactamase group. Bacteriogram were similar between cuffed and non-cuffed catheters.

21% cases occurred within 30 days of catheter insertion and the median time to first infection was 47 days. There were no distinct differences in place of dialysis amongst the cases. Median length of hospital stay was 9 days.

CONCLUSIONS:

This local prospective surveillance study provided invaluable information to us for further direction in managing our dialysis patients on catheters. The prevalence of MRSA is a matter of concern.

Session: Poster

Topic: APSDA - Management of dialysis access related complication
Abstract ID: 173

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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

RENDEZVOUS TECHNIQUE FOR INSERTION OF CUFFED TUNNELED CATHETER IN FEMORAL VEIN

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INTRODUCTION AND AIMS:

Vascular access is important for patients with end-stage renal failure (ESRF) who undergo haemodialysis. The arteriovenous fistula is the preferred choice because it is associated with less infection and thrombosis complications. A dialysis catheter is an alternative if patients have exhausted vascular access for fistula creation and are not suitable for peritoneal dialysis or kidney transplantation. Here we report a"rendezvous technique" for tunnelled catheter insertion.

METHODS:

Background: A 61-year-old woman with ESRF due to diabetes has multiple vascular access-related complications for the past 11 years. The initial radio-cephalic fistula was stenosed, and new right brachio-cephalic fistula (BCF) was ligated for pseudo-aneurysms. Left fore-arm loop graft was also thrombosed and then left BCF was created but failed to mature. Then, shes catheter dependent via right tunnelled femoral, and she had multiple admissions due to various reasons that also required dialysis catheter exchange.

RESULTS:

Technique: Her recent catheter exchange requires the implementation of rendezvous techniques due to the huge technical difficulty. This technique has been reported in patients with coronary and biliary problems. However, for the insertion of dialysis vascular access, there was no report so far. The description of this technique is as follows:

1. Hydrophilic coated glide-wire was inserted into the existing catheter.
2. The existing catheter was removed and replaced with a new catheter, but the tip cannot pass through the stenosed intrahepatic segment of inferior vena cava (IVC), so rendezvous techniques applied.
3. The right external jugular (EJV) was punctured and left with a catheter sheath.
4. Glide-wire was gently passed through the femoral cuffed catheter, intrahepatic IVC, superior vena cava then to the right EJV catheter sheath.
5. By holding the glide-wire from both ends (EJV and femoral), the tip of the new catheter was pushed slowly through the stenosed intrahepatic IVC. The patient later successfully dialysed through the new catheter.

CONCLUSIONS:

Rendezvous technique can be considered when the veins are stenosed.

Session: Poster

Topic: APSDA - New innovation in Hemodialysis Access
Abstract ID: 175

JCTN (2019) Volume 1 , S1-123

JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

THE EFFECTIVENESS OF A MULTIDISCIPLINARY INTERVENTIONAL NEPHROLOGY PROGRAM

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INTRODUCTION AND AIMS:

A multidisciplinary Interventional Nephrology Program was established in our center for timely salvage of dysfunctional arteriovenous (AV) access. We aim to evaluate the effectiveness of the multidisciplinary Interventional Nephrology Program (INP) after its establishment in March 2015.

METHODS:

This retrospective before-and-after study involved patients who were admitted to our center with dysfunctional AV access via the emergency department 1 year before and after the establishment of INP. Data were obtained from electronic medical records. Outcome measures include waiting time for intervention, length of stays (LOS), number of temporary dialysis catheter insertion and inpatient dialysis required and success rates of the interventions.

RESULTS:

During the studied period, a total of 881 interventions were performed on 554 patients. Of which, 407 interventions were done pre-INP and 474 interventions were performed post-INP. Median LOS and days to intervention were shorter post-INP compared to pre-INP (3 (IQR 2,6) vs. 5 (IQR 3,8), $p<0.0001$ and 1 (IQR 1,2) vs. 3 (IQR 2,4), $p<0.0001$). A greater proportion of interventions were performed within 24 hours following admission post-INP (50.2% vs. 17.2%, $p<0.0001$). The median number of inpatient dialysis required during each admission was also smaller post-INP (2 (IQR 1,3) vs. 3 (IQR 2,4), $p<0.0001$) with a greater proportion of admissions required temporary dialysis catheter insertions pre-INP (52.8% vs. 32.9%, $p<0.0001$). The procedural success rates were greater post-INP (92.8% vs. 87.2, $p=0.02$).

CONCLUSIONS:

Our result suggests that the setting up of the interventional nephrology has improved the delivery of healthcare services to patients who are admitted for dysfunctional AV access.

Session: Poster

Topic: APSDA - Others
Abstract ID: 177

JCTN (2019) Volume 1 , S1-123

JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

PERIPHERAL ARTERY OCCLUSIVE DISORDER IN THE VASCULAR ACCESS ARM

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INTRODUCTION AND AIMS:

Peripheral vascular occlusive disease(PAOD) is common in DM ESRD patients. Atherosclerosis(AS) reduces the internal diameter of the blood vessels, resulting in ischemic symptoms. Most AS occurs at the lower extremity. However, rarely in the upper limb, symptoms such as finger pain, scarring, and delayed wound healing can be seen. Especially in hemodialysis vascular access(VA) arm, the arterial blood flow is reduced and the symptoms may worsen. We report a case of PAOD on the ipsilateral side of arteriovenous fistula treated with PTA in DM ESRD patient.

METHODS:

A 57 year old man was diagnosed with DM ESRD in 1999. He underwent Lt. brachiocephalic fistula operation in 2000. He had no effect on the conservative treatment. The flow volume of VA was 1100 ml / min.

RESULTS:

In fistulography, a stenosis of 3 mm in diameter was observed in the juxta-anastomosis site. Arteriography revealed calcification and multiple stenosis of the brachial artery from the splitting of the ulnar artery and radial artery to the palmar arch. Balloon dilatation was performed on both sides of the radial artery and ulnar artery.The 5Fr sheath was inserted through the brachial artery approach, and heparin 3000unit was administrated. A 2 mm * 4 cm balloon catheter (Medtronic Vascular, Santa Rosa, CA, USA) was inserted to the distal part 90% stenosis lesion of the ulnar artery for up to 15 ATM for 3 minutes. Afterwards, a 2 mm * 15 cm balloon catheter was inserted into the ulnar artery and radial artery and maintained at Pr 8 atm for 2 min. Stenosis was not observed and improvement of blood flow could be confirmed.

CONCLUSIONS:

Symptoms such as pain and delayed wound due to PAOD in the fistula arm can be effectively treated by arterial PTA

Session: Poster

Topic: APSDA - Management of dialysis access related complication
Abstract ID: 182

JCTN (2019) Volume 1 , S1-123

JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

ULTRASOUND-GUIDED CANNULATION OF DIFFICULT ARTERIOVENOUS ACCESS WITH PLASTIC CANNULA: A SINGLE-CENTER EXPERIENCE

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INTRODUCTION AND AIMS:

Blind technique with metal needles has been the traditional method of cannulating arteriovenous (AV) access for hemodialysis. However, not all AV accesses are easily accessible with blind technique due to their location and depth. Complicated cannulation may result in reduced patient satisfaction, unnecessary costs and increased dependence on dialysis catheters. This retrospective audit aimed to report the outcome of ultrasound-guided cannulation of difficult AV access with plastic cannula.

METHODS:

The patients were referred to Interventional Nephrologist for ultrasound-guided cannulation with plastic cannua following failed attempts by dialysis nurses. Outcome measures were successful cannulation, the number of passes, successful hemodialysis and blood flow achieved.

RESULTS:

Twenty-two patients with a median age of 61.5 (IQR 53.8, 74.5) years were included. Majority of the accesses were arteriovenous fistula (80%) while anastomosis was predominantly radiocephalic (44%) followed by brachiocephalic (20%) and brachiobasilic (16%). Seven of the accesses (32%) were new AV access. The median access flow of the new accesses was 509 mL/min (IQR 251, 817) and 615 mL/min (IQR 515, 2200) for all accesses. Indications for ultrasound-guided cannulation include failed cannulation by dialysis nurses (48%), swollen AV access (41%) and new AV access for a trial of cannulations (9%). A total of 24 arterial and 25 venous sites cannulations were recorded. All the cannulations were successful without complications. Successful cannulations at first pass for arterial and venous sites cannulations were 92% and 88% respectively. The mean blood flow achieved was 214 ± 24.4 mL/min. All patients completed the length of dialysis prescribed. Three patients (13.6%) eventually underwent dialysis catheter insertion due to multiple failed cannulation attempts.

CONCLUSIONS: Ultrasound guided cannulation with plastic cannula can be safely performed in difficult AV accesses with high successful rates and may be a useful bridging approach while waiting for a definite intervention.

Session: Poster

Topic: APSDA - Management of dialysis access related complication
Abstract ID: 183

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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract Open Access

PREEMPTIVE PTA FOR INCREASING BLOOD FLOW DURING DIALYSIS IN PATIENTS WITH BMI OF 40

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INTRODUCTION AND AIMS:

Maintaining an appropriate KT/V is an important indicator of HD survival and morbidity. Recently, westernized diets have been shown to be common in dialysis patients as the overweight and obesity populations increase. Changes in dialysis modality, use of high surface area filters, increased dialysis time, and increased dialysis blood flow can be used to maintain adequate dialysis efficacy. We present a case of superobese patients who were changed from peritoneal dialysis to hemodialysis and nevertheless did not maintain sufficient dialysis dose, after preemptive AVF PTA treatment and maintained the proper efficiency.

METHODS:

A 36-year-old man was 179 cm tall and weighed 128 kg. The underlying disease was anti-GBM disease, diagnosed at the end of January 19, 2011, and started peritoneal dialysis treatment. After 2 years of dialysis, weekly Kt/V was maintained at around 2.4. As urine decreased, it decreased to 1.5 and 1.6. The patient then complained of generalized itching and decreased food intake, converting to HD. The patient switched to HD after Lt. radiocephalic fistula op. After the HD treatment, the first Kt/V was 1.07 and the URR was 58.99 (dialyzer 210H, blood flow 350ml/min, dialysis time 280min).

RESULTS:

The pre-emptive AVF PTA was performed to maintain sufficient blood flow because of the negative artery alarm of the hemodialysis machine when blood flow was increased. On angiography, 70% stenosis was observed in Juxt-anastomosis and 7 mm ballooning was performed. Stenosis was no longer observed on post ballooning fistulography. After the intervention, Kt/V 1.3, URR 67.3 (dialyzer 210H, flow 450ml/min, dialysis time 300min) was observed and the symptoms of the patient were alleviated.

CONCLUSIONS:

Super obese hemodialysis patients were able to maintain sufficient Kt/V by increasing blood flow through pre-emptive PTA

Session: Poster

Topic: APSDA - Management of dialysis access related complication
Abstract ID: 184

JCTN (2019) Volume 1 , S1-123

JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract

Open Access

ARTERIO-VENOUS FISTULA CREATION: OUR EXPERIENCE IN ESTABLISHING A VASCULAR ACCESS TEAM IN A GENERAL SURGERY DEPARTMENT, IN HOSPITAL RAJA PERMAISURI BAINUN IPOH, PERAK, MALAYSIA.

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INTRODUCTION AND AIMS:

The need for Arteriovenous fistulae (AVF) creation surgery for long term hemodialysis access in our hospital has been increasing. Prior to 2015, AVF creation in our centre were only done by a few specialists, in only a minute number of patients, with the rest of the patients referred being referred to regional Urology or Vascular Surgery Units in the Klang Valley. A team dedicated to assess and create arteriovenous fistulae was established in 2015.

METHODS:

Details of AVF creations done were traced from the electronic records, from 2009 until 2019, with focus from 2015 onwards . Patients referred underwent clinical and ultrasound assessment in our clinic. Those with suitable vessels were counselled and fixed a date for the procedure. Majority had the AVF creation done under local anaesthesia as Daycare surgery. Post operatively review was at 1 week, 6 weeks and 3 months.

RESULTS:

From 2008 until 2014, total of 127 AVF were created, by General Surgeons, Plastic Surgeons, and our Visiting Urologists. In 2015, a dedicated vascular access team was created , started off by 2 senior specialists, assisted by 4 resident medical officers. After establishing the vascular access team, 116 AVFs were created that year alone, with increasing numbers the following years, up to 329 fistulae were created in 2018. Most patients had a brachio-cephalic fistula, followed by radio-cephalic fistula, and least was the 2 stage brachio-basilic fistula creation. Overall primary patency at 6 weeks was 69% for the BCF, and 68 % for the RCF, and 45 % for the BBF.

Commonest early complications were thrombosis, followed by surgical site infection.

CONCLUSIONS:

A dedicated team within a general surgery unit, can provide vascular access services, in assessing and creating AVFs, with acceptable results.

Session: Poster

Topic: APSDA - Training and Education for Dialysis Access Management

Abstract ID: 188

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JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

Abstract

Open Access

SINGLE CENTRE 10 YEARS EXPERIENCE: COMPARING OUTCOME OF CRBSI RISKS

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INTRODUCTION AND AIMS:

The use of hemodialysis catheter carries significant morbidity and mortality for patients receiving hemodialysis therapy. The use of catheter is usually unavoidable, and the risk factors that determined mortality is yet to be determined.

METHODS:

To determine risk for mortality of patients developed catheter blood stream infection. All patients who fulfilled criteria for catheter blood stream infection admitted to Hospital Selayang from 1st January 2009 until 31st March 2019 were included. Patients who were under 18 years old, kidney transplanted and diagnosed with terminally ill diseases were excluded. Data was collected retrospectively from electronic records of Total Hospital Information System (THIS) and was analyzed using SPSS version 23.

RESULTS:

Total of 669 patients were screened and 652 fulfilled inclusion criteria. Mortality rate was 5.7% (n=37). Majority (57%) are males and were having uncuffed catheters (82.5%). Majority were dialyzing at private hemodialysis centers (70.9%), followed by 18.3% in government hemodialysis centers and 10.4% from NGO center. Seventy one percent of the catheters were removed on diagnosis. One quarter (26.5%) were elderly (65 years old and more). Mean age was 55.45 (± 12.47) years old. A third (32.4%) grew Staphylococcus aureus. The hazard ratio of staphylococcal infections is 2.040 (1.048-3.971) compared to other types of infections (p = 0.027). Elderly patients who developed CRBSI also higher hazard ratio of 2.222 (1.131-4.366) and p value is 0.018. However, Diabetes Mellitus and use of uncuffed hemodialysis catheter have no significant risk with hazard ratio of 0.963 (0.400-2.317) and 0.907 (0.388-2.119) respectively.

CONCLUSIONS:

Elderly patient who are on hemodialysis who had CRBSI with Staphylococcal infections carries significant higher mortality risk. Extra caution must be applied to all elderly undergoing hemodialysis using catheter.

Session: Poster

Topic: APSDA - Basic Research in Dialysis Access
Abstract ID: 201

JCTN (2019) Volume 1 , S1-123

JOURNAL OF CLINICAL AND TRANSLATIONAL NEPHROLOGY (JCTN)

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