

A LITTLE BITE WITH A NEAR-LETHAL OUTCOME

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INTRODUCTION AND AIMS:

The slow loris is a genus *Nycticebus* (*Nycticebus coucang*) which are scattered around Southeast Asia. However, belying its cute appearance is a venomous bite that causing anaphylactic shock in humans. There are no reported bites so far that are known to cause severe metabolic acidosis. Here we report a patient who was bitten by a slow loris and developed severe metabolic acidosis requiring hemodialysis.

METHODS:

Case report

RESULTS:

A 74 year-old Malay lady with known hypertension, had alleged bite of left index finger by a slow loris atop a pomelo tree at her house. Within minutes, her left index finger was swollen and numbness spread over her left hand upwards to her elbow. Then, she started to vomit, developed central chest pain and a pre-syncopal attack. Subsequently developed abdominal pain with diarrhoea. She was conscious but lethargic. Blood pressure was 56/42, heart rate 88 and oxygen saturation under room air was 37%. The patient was diagnosed with anaphylactic shock and received fluid resuscitation together with intravenous (IV) piriton, hydrocortisone and intramuscular (IM) adrenaline. However, she still remained hypotensive and thus started on adrenaline IV infusion of 3mg per hour. Her first arterial blood gas measurement under high flow mask and after

1 litre of normal saline showed metabolic acidosis (pH 7.21, pCO₂ 36, pO₂ 226, lactate 4.3 and HCO₃ 15.2). Her renal profile (RP) reads as follows: creatine 122, urea 7.1, sodium 142 and potassium 3.5. The urine output was 100cc. After 4 litres of fluid resuscitation, her acidosis continued to worsened (pH 7.04, pCO₂ 44, pO₂ 55, lactate 7.5 and HCO₃ 9.8) and urine output remained. We ultimately decided for haemodialysis. After her first haemodialysis, the patient improved clinically and biochemically on her VBG. Throughout her admission, the patient only required one session of hemodialysis. She was discharged well on day 3 of admission

CONCLUSIONS:

The bite of a slow loris can be potentially dangerous and even lethal. From this case report, we have learnt of a patient who, in addition to developing anaphylactic shock after such a bite, also experienced severe metabolic acidosis that was refractory to fluid resuscitation, but subsequently recovered well with timely haemodialysis

Session: Poster

Topic: MSN - Hemodialysis

Abstract ID: 113



CARING (COMPASSION OF RENAL ILLNESS AND ENSUING): INTERVENTIONAL COMMUNITY BASED PROGRAM FOR END-STAGE RENAL DISEASE PATIENT.

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INTRODUCTION AND AIMS: In Malaysia, the cohort of End-Stage Renal Disease (ESRD) patient is increasing exponentially and healthcare services and resources are unable to match the demand. Resources not only focus on the number and quality of dialysis treatment but also cover the cost of dialysis access and payment for the treatment itself. These limited resources invariably lead to catastrophic events among ESRD patients.

METHODS:

We conducted an interventional community-based program to spread knowledge of ESRD and its potential treatment. The aim of the program is to provide assistance to the ESRD community in getting dialysis sponsorship by empowering the health provider and the patient with current updates on dialysis sponsorship procurement. The programme enlisted the support of government body and non-government organization such as National Kidney Foundation, Zakat Selangor, Socso, Buddhist Tzu Chi etc. Participants who attended the program were asked to fill the provided pre and post questionnaire.

RESULTS:

A total of 109 participants attended the program, comprised of patients (40%), patients' family members (32%), and health providers (28%). Most of the patients worked in private sectors (65%) and their household incomes are around RM 1000-4999 per month (63%). Seventy-two percent (n=78) believed that to secure sponsorship is difficult, but 68% of them did not have enough knowledge or awareness. During pre-event evaluation, only 15-20% knew about the duration needed for sponsorship approval, fistula-operation sponsorship, the required forms for sponsorship together with distribution and capping of

amount. At post-event, almost 98-100% participants became aware on how to apply.

CONCLUSIONS:

CARING is a good intervention for the ESRD community and health providers in providing awareness on how to obtain financial assistance for dialysis by transferring new knowledge. This will also greatly improve day to day clinical work in hospitals as health providers are now better informed.

Session: Poster

Topic: MSN - Others

Abstract ID: 116

LOWER EXTREMITY ARTERIOVENOUS FISTULA (AVF) AS THE LAST RESORT FOR VASCULAR ACCESS: A CASE REPORT

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INTRODUCTION AND AIMS:

Haemodialysis (HD) remains the most popular renal replacement therapy (RRT) option worldwide. The ideal vascular access for haemodialysis is native arteriovenous fistula (AVF).

METHODS:

Case report

RESULTS:

A 35-year-old Malay man with end stage renal disease (ESRD) has been on RRT since 2003. Initially he was dialysed via HD for three years but it was complicated by vascular access problem due to recurrent AVF thrombosis. As a result, he was started on continuous ambulatory peritoneal dialysis (CAPD) in 2006. Unfortunately, he had ultra filtration (UF) failure with poor urea clearance (weekly $Kt/v \leq 1.7$). He only managed to achieve UF with icodextrin.

In 2016, the patient underwent left lower limb AVF creation between the great saphenous vein and posterior tibial artery at the ankle. The AVF was cannulated after 4 months and HD was commenced with blood flow rate of 240 mL/min during dialysis.

This patient has been travelling to and from the dialysis centre on foot. There is no bleeding complications reported so far. He has been continuing uneventful HD through left lower limb AVF for more than 2 years and with mean Kt/V of 1.38.

CONCLUSIONS:

Lower limb AVF is a feasible site of fistula creation for ESRD patients when both upper limbs AVF are not possible.

Session: Poster

Topic: MSN - Hemodialysis

Abstract ID: 120

SLE END GAME: A CASE SERIES ANALYSIS OF SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) DIALYSIS CRASH-LANDERS.

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INTRODUCTION AND AIMS:

SLE is a chronic inflammatory disease with around 50% of patients have kidney involvement. Lupus nephritis (LN) still remains as major cause of morbidity and mortality in SLE patients. Severe renal manifestation of SLE is not uncommon. Approximately 10% of patients will develop end stage renal disease (ESRD).

METHODS:

Case series

RESULTS:

We report a case series of 7 SLE patients who were dialysis crash-landers in HRPZ II. All patients were diagnosed as SLE with lupus nephritis - 2 had multiorgan involvement. 2 out of 7 patients had undergone previous renal biopsy. At presentation in the Accident & Emergency Department, 4 patients had fluid overload symptoms while other 3 patients had progressively worsening acute kidney injury (AKI) with electrolytes imbalance. All patients were referred to the nephrology team. Two patients were intubated upon arrival. 4 patients were planned for acute dialysis within 24 hours admission while other 3 patients were dialysed few days after admission. Documented highest creatinine and urea pre-dialysis were 1927 $\mu\text{mol/L}$ and 41 mmol/L respectively. 6 patients had dialysis via femoral catheter and 1 patient had HD via internal jugular catheter (IJC) with an average number of HD done was 4 times and the average length of stay in hospitals was 10 days. 1 patient had immediate biopsy done after dialysis. 3 patients were

started on corticosteroids, 2 patients on Tab Mycophenolate Mofetil (MMF), 1 patient had plasma exchange, and 1 patient on Tab Azathioprine.

Most patients improved clinically post dialysis. However, all patients ended up with ESRD requiring permanent dialysis.

CONCLUSIONS:

All of our SLE crash-landers required acute dialysis and subsequently became dialysis dependent. Majority of them did not have renal biopsy.

Session: Poster

Topic: MSN - Hemodialysis

Abstract ID: 121

HYPERSENSITIVITY TO PLASMA EXCHANGE (PE) IN SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) PATIENTS WITH LUPUS NEPHRITIS (LN): CASE REPORTS

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INTRODUCTION AND AIMS:

Plasma exchange (PE) is an important treatment often use as second line treatment for SLE with LN, failed immunosuppressive therapy, resistant active lupus or rapidly progressive glomerulonephritis (RPGN). Hypersensitivity in PE occurred in 3-12% of cases.

METHODS:

Case reports

RESULTS:

Case 1: 18 year old Malay lady was diagnosed with SLE with multisystem involvement in 2018. In early 2019, patient was referred from district hospital for acute pulmonary oedema (APO) secondary to accelerated hypertension, sepsis secondary to hospital acquired pneumonia (HAP), active SLE with LN and acute on CKD. Patient was intubated and monitored in ICU for 4 days. PE with FFP was done and completed four times. During the last PE, patient developed hypersensitivity reaction with generalized urticaria.

Case 2: 22 year old Malay lady presented to Nephrology clinic with symptoms and signs of nephrotic-nephritic syndrome. She was diagnosed with SLE and renal biopsy revealed changes of Lupus Nephritis (ISN/RPS class III) with diffuse glomerular ischaemic changes and vascular occlusions, suspicious of thrombotic microangiopathy. Based on the biopsy result, she was counselled for PE. She completed six exchanges, alternating every other day with HD. The patient developed a few episodes of rashes during the procedures.

No serious adverse event reported for both cases. Vital signs were stable throughout the procedures. Both patients were given a bolus dose of IV hydrocortisone and the symptom resolved. For the second case, PE was able to be completed with adjustments of the FFP replacement volume.

CONCLUSIONS:

Based on data collected by Canadian Apheresis Study Group, most common hypersensitivity during PE were fever, chills, urticaria, muscle cramps and paraesthesia and more frequently to occur when plasma is used as replacement fluid. Hypersensitivity in PE need to be considered although most reactions are mild with no clinical significance.

Session: Poster

Topic: MSN - Glomerulonephritis

Abstract ID: 122

HISTOLOGICAL PREDICTION OF PROGRESSIVE RENAL FAILURE IN IGA NEPHROPATHY (IGAN) PATIENTS: SINGLE CENTRE RETROSPECTIVE COHORT STUDY

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INTRODUCTION AND AIMS: Immunoglobulin A Nephropathy is a common primary glomerular disease in Malaysia and worldwide. Its clinical outcome varies greatly and approximately 20-40% of affected patients may develop ESRD within 10-20 years of diagnosis. Predictors of disease progression are valuable to guide treatment. Objective: To evaluate the histopathological predictors for progression in IgAN.

METHODS:

We retrospectively reviewed all biopsy-proven IgAN patients treated at our centre from January 2000 to December 2014 and outcome was assessed in Dec 2016.

RESULTS:

During the study period, a total of 26 patients with biopsy proven IgAN. Of these, 61.5% were male and 38.5% female with a mean age of 35.1 ± 10.1 years. Initial presentations were asymptomatic urinary abnormalities in 80.2%, macroscopic hematuria in 3.8% and nephrotic syndrome in 15.4%. 19.2 % had hypertension and 19.2% had CKD stage 3B and above. At the end of study period, 7.7 % progressed to ESRD. 65.4% of study patients had >50% mesangial hypercellularity (M1), 23.1% endocapillary hypercellularity (E1), 88.5% segmental glomerulosclerosis (S1) and 65.4% 26 50% or > 50% tubular atrophy (T1/T2). There were no crescents. Patients with higher MEST-C score were 3 times more likely to have eGFR < 45ml/min at presentation (OR= 3.08, p= 0.068); 2 times higher risk of progressive renal deterioration (OR= 2.1, p=0.248); and 1.34 times risk of developing ESRD (OR=1.34, p= 0.628). Due to our small number, M, E, S, T did not show significant correlation with renal outcome individually.

Spearman's nonparametric correlations analysis showed that there was correlation of MEST-C score with the eGFR on presentation ($r = -0.474$, $p = 0.011$) and outcome of renal function after 10 years ($r = -0.642$, $p = 0.043$).

CONCLUSIONS:

Histopathological features can be used as prognostic indicators independent of clinical factors in our local population and guide treatment in IgAN.

Session: Poster

Topic: MSN - Glomerulonephritis

Abstract ID: 124

A CASE SERIES OF END STAGE RENAL FAILURE PATIENTS WITH DENGUE INFECTION: CONTINUE WITH ROUTINE HAEMODIALYSIS OR INDIVIDUALISED TREATMENT?

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INTRODUCTION AND AIMS:

Medical care professions face immense difficulty in managing end stage renal failure patients with dengue infection especially when complications arise during or after hemodialysis. There have been limited published data regarding this entity.

METHODS:

A retrospective analysis of medical records, clinical presentations, laboratory findings with positive dengue serology, bedside echocardiogram and hemodialysis prescription of end stage renal failure patients on regular hemodialysis admitted from October 2018 to March 2019 were reviewed and compared.

RESULTS:

A total of 10 patients were identified, 6 males and 4 females with a mean age of 49.8 years at presentation. Diagnosis upon admission were divided into severe dengue (30%), dengue fever with (50%) or without warning sign (20%). Mean urea and creatinine at presentation were 17.6 mmol/L and 818.2 mcmol/L respectively. We looked at the clinical findings during critical phase of dengue and hemodialysis prescription that were rendered. All 3 severe cases were complicated with bleeding. Blood products were given for 2 cases without hemodialysis support until recovery phase. One case required hemodialysis as early as 14 hours into critical phase due to persistent lactic acidosis. Regular monitoring of fluid status with echocardiogram was maintained for all 3 patients. The 5 patients with warning

signs were dialysed at a mean time of 34.2 hours into critical phase with low blood pump and no extraction. This approach was taken to avoid shock due to further volume depletion during the capillary leakage phase. There were no mortalities and all patients discharged well.

CONCLUSIONS:

We postulate that patients dialysed during critical phase may accentuate the inflammatory cascade leading to cytokine storm and subsequently causing hemodynamic instability. Hence, hemodialysis support during dengue infection should be individualised with multidisciplinary approach in an ICU setting for a better outcome. Further clinical trials on this entity may be beneficial.

Session: Poster

Topic: MSN - Hemodialysis

Abstract ID: 125

ANALYSIS OF MEDICATION ERROR REPORTS IN HOSPITALISED RENAL PATIENTS: A MULTI-CENTER EVALUATION

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INTRODUCTION AND AIMS:

Renal patients generally have multiple co-morbidities which often requires multi-complex pharmacotherapy. A significant proportion of medication-related problems in hospitalised renal patients are the consequences of medication errors (ME). More than 85% of renal patients were reported to have experienced at least one ME during their hospital stay. As a result of complex pharmacotherapy, ME in these cohort of patients may lead to severe consequences. In view of this, there is a need to understand the characteristics of ME in this study population in order to identify potential preventive action(s).

METHODS:

This is a retrospective observational study. All ME reports involving hospitalised renal patients in year 2016 and 2017 from Hospital Kuala Lumpur and Hospital Tengku Ampuan Afzan registries were retrieved. Descriptive analysis was conducted on the types of error, outcome, medications involved and contributing factor of the errors.

RESULTS:

A total of 13 ME reports were retrieved and included in this analysis. The most common type of error occurred during medication administration (n=7) followed by dispensing (n=5) and prescribing (n=1). Of the 13 errors, 10 had reached patient. Three errors had caused harm in which all required serious medical intervention. Most errors involved immunosuppressive agents (n=6). The main contributing factor was identified to be failure in adhering to counter checking procedure which is the 3-point counter checking mechanism (n=9).

CONCLUSIONS:

The prevention of medication error is a shared responsibility at all levels of care. The 3-point counter checking skill should be strengthened among all healthcare providers.

Session: Oral

Topic: MSN - Others

Abstract ID: 127

OUTCOMES OF ABO-INCOMPATIBLE LIVING DONOR KIDNEY TRANSPLANTATION: MULTI-CENTRE EXPERIENCE IN MALAYSIA

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INTRODUCTION AND AIMS:

ABO-incompatible (ABOi) Living Donor Kidney Transplantation (LDKT) was first performed in Malaysia in July 2011 and is still in its infancy. It is a potential solution in addressing the shortage of kidneys for transplantation. Data on the outcomes remain limited.

METHODS:

We retrospectively collected clinical and laboratory data from three main transplant centres in Malaysia namely Hospital Kuala Lumpur, Prince Court Medical Centre, and University Malaya Medical Centre. There were 169, 79, and 130 of end stage renal disease patients underwent LDKT in the respective centres between 1st July 2008 to 30th June 2018. Of the 378 patients, 26 were ABOi (9, 11 and 6 cases from the respective centres) with follow-up period ranging from 0-91 months. Desensitisation regimens varied among institutions in intravenous rituximab regime, the use of immuno-absorbent and intravenous immunoglobulin.

RESULTS: Five out of twenty-six recipients have positive donor specific antibody (DSA). The highest baseline ABO-antibody titre was 1:2048 and lowest being 1:2. On transplant day, twenty-three achieved titre of $\leq 1:16$; two have titre of 1:64 and one has titre of 1:32. Patient, graft and death-censored graft survivals were 96.2%, 92.3% and 96.2% respectively at 1-year post-LDKT; and 96.2%, 82.4% and 88.2% respectively at 5-year post-LDKT. One has primary graft failure due to venous thrombosis and one death with functioning graft due to septicemic shock. Three patients had acute cellular rejection (12.5%), two had antibody-mediated rejection (8.3%), three had CMV infection (12.5%) and five had BKV infection (20.8%).

Mean creatinine levels post transplantation were 118.58 ± 33.42 $\mu\text{mol/L}$ at 6-month, 115.71 ± 37.48 $\mu\text{mol/L}$ at 1-year and 143.79 ± 99.86 $\mu\text{mol/L}$ at 5-year post transplantation.

CONCLUSIONS:

ABOi LDKT could be safe and valuable choice of LDKT even with varied desensitisation regimens used for patients with relatively high baseline anti-ABO titres and presence of DSA.

Session: Oral

Topic: MSN - Transplant

Abstract ID: 128

PREDICTORS AFFECTING INITIAL MEMBRANE CHARACTERISTIC IN PERITONEAL DIALYSIS PATIENTS

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INTRODUCTION AND AIMS:

Studies have shown high transporter status in peritoneal dialysis (PD) patients is associated with higher technique failure and dropouts. Objective of this study is to identify possible predictors and association with initial membrane characteristic.

METHODS:

This is retrospective cohort study included all new PD patients with peritoneal equilibration test (PET) done within first 3 months post PD training from January to December 2017 in CAPD unit Hospital Tengku Ampuan Rahimah (HTAR), Klang. Types of initial membrane characteristics and associated predictors were reviewed. High and high average transporters were grouped as high transporter (HT) while low transporter (LT) consisted of low and low average transporters. Data collected were analysed using SPSS version 23.

RESULTS:

A total of 87 patients had initial PET done, 44 patients were HT and 43 were LT. Mean age for HT versus LT was 52.8 ± 12 years and 55.1 ± 14.1 years respectively, $p=0.47$. There was higher dropout in HT - 13 (29.5%) versus 5 (11.6%) patients, $p=0.039$. Among patients with history conversion from HD to PD, 12 (27.9%) had initial HT status, while 10 (23.3%) categorized as LT, $p=0.621$. Usage of intermittent peritoneal dialysis (IPD) pre training did not show association with initial PET. 13 (30.2%) in HT versus 17 (39.5%) in LT had history of IPD usage, $p=0.365$. No difference observed in history of 4.25% peritoneal dialysate usage - 15(35.7%) in HT versus 15(34.9%) in LT, $p=0.93$. In HT group, 5 (11.9%) patients had history of peritonitis prior to PET, and 5 (11.6%) patients with LT status had prior peritonitis, $p=0.968$. History peritonitis

was not associated with types of transporter status. Serum albumin was significantly associated with types of transporter status, albumin level for HT 33.89.3mg/dL and LT 37.45.8mg/dL, $p=0.04$.

CONCLUSIONS:

From this study, there were association between lower serum albumin level and higher dropout rate with high transporter status.

Session: Poster

Topic: MSN – Peritoneal Dialysis

Abstract ID: 129

ACUTE KIDNEY INJURY (AKI) IN DIABETIC PATIENTS POST CORONARY ARTERY BYPASS GRAFTING (CABG): A 3-YEAR OUTCOME

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INTRODUCTION AND AIMS:

Acute kidney injury (AKI) post- coronary artery bypass grafting (CABG) is associated with high morbidity and mortality. The AKI risk increases to 2-fold post-CABG among diabetics compared to non-diabetics. Despite this knowledge, association between post-operative AKI and outcome in diabetic patients are not widely examined and reported.

METHODS:

This is a retrospective observational cohort study involving 232 patients who underwent isolated CABG at Hospital Serdang in 2015. All diabetic patients (65%) were analysed and non-diabetic patients became the control group. They were divided into 4 subgroups - DM with existing renal impairment (DM-RI), DM without RI (DM-NRI), non-diabetic with RI (NDM-RI) and non-diabetic without RI (NDM-NRI). Patients were followed up for 3 years until 2018.

RESULTS:

AKI was seen in 79 patients (34.1%) and significantly higher in diabetic group (39.7%) ($p = 0.014$). All-cause mortality rates were 25.8% for DM-RI, 16.7% for NDM-RI, 10.1% for DM-NRI and 5.5% for NDM-NRI ($p=0.023$). There were no differences in the procedural aspects of the CABG among the subgroups. Diabetic patients with severe stage 3 AKI had 5.45-fold increased risk of mortality, compared to diabetics without AKI (CI 1.63-18.26, $P = 0.01$). The risk was doubled at 10-fold when we factored in AKI requiring RRT (OR 10.1, CI 4.05-25.19, $p<0.001$). High MACE incidence was also seen in the DM-RI (OR 2.79 CI 1.01-

7.68, $p=0.047$). Diabetic patients with AKI had more rapid annual eGFR decline at 3.9mL/min/1.73m² compared to non-AKI diabetics at 1.4mL/min/1.73m² per year.

CONCLUSIONS:

Diabetes is a strong independent predictor of morbidity and 3-year mortality and the outcome is worse with those with co-existing renal impairment.

Session: Oral

Topic: MSN – Others

Abstract ID: 131

A PAINFUL LESSON TO LEARN

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INTRODUCTION AND AIMS:

alciphylaxis is a rare vascular calcification syndrome, presenting with excruciatingly painful skin ischemia and necrosis. We report a case of calciphylaxis its diagnosis, management, and outcome.

METHODS:

Case report

RESULTS:

Miss B, chronic kidney disease (CKD) stage 5 on hemodialysis since 2009. She developed secondary hyperparathyroidism refractory to medical therapy, hence parathyroidectomy was done in April 2015. Intact parathyroid hormone level dropped from over 6000pg/ml (2015) to 1773 pg/ml (2016). It was suspected one parathyroid gland was left behind as her parathyroid hormone level remained elevated. She developed closed scapula fracture in 2017 and multilevel spine compression fractures in 2018. Despite medical therapy, which included a course of intravenous paracalcitol, her parathyroid hormone level continued to increase. However, she refused to be referred back for parathyroidectomy. In February 2019, she presented with severe left lower limb painful necrotic ulcers for three weeks prior to admission. The pain was so severe that she required multiple pain control agents. Computer tomography of bilateral lower limbs revealed severe peripheral vascular disease, osteoporosis and pathological fracture of left neck of femur. Above knee amputation of left lower limb was carried out due to life threatening critical limb ischemia. Post operatively, painful necrotic ulcers starting to develop over her right lower limb. Biopsy of the ulcers was reported as early and focal calciphylaxis with leukocytoclastic vasculitis. She

was treated with sodium thiosulfate 25g post dialysis for two weeks and cinacalcet 25mg daily. Her painful skin lesions stopped worsening and improving since then.

CONCLUSIONS:

Calciphylaxis typically manifests as painful necrotic skin ulcers among CKD 5 with secondary/tertiary hyperparathyroidism which mimics critical limb ischemia. High index of clinical suspicion is paramount to pick up calciphylaxis early by performing skin biopsy for histopathological examination and initiate treatment accordingly.

Session: Poster

Topic: MSN - Mineral Bone Disease

Abstract ID: 134

THE LONG TERM SURVIVAL RATE OF ESRD PATIENTS ON 2-WEEKLY HAEMODIALYSIS IN HOSPITAL RAJA PEREMPUAN ZAINAB II, KOTA BHARU, KELANTAN

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INTRODUCTION AND AIMS:

The practice in Kelantan is that, while awaiting definitive RRT, inpatient fortnightly bridging haemodialysis for ESRD patients, is an alternative for those who are contraindicated to intermittent peritoneal dialysis. This study evaluates the long term survival rate of this therapy.

METHODS:

This retrospective, single center study involves all patients on fortnightly bridging haemodialysis from January 2018 until March 2019, with data collected from the Nephrology Department, nursing census and medical records. Descriptive analysis was performed using SPSS version-20.0. Survival analysis was done using Kaplan-Meier method.

RESULTS:

A total of 49 patients (23 males, 26 females) were identified with a mean age of 51.7 years. 20 patients (40.8%) was converted to a more regular temporary dialysis (two to three times weekly) at our haemodialysis unit before finally receiving definitive RRT. Only 16 patients (32.6%), were directly switched to definitive RRT from 2-weekly bridging haemodialysis. One patient was converted to intermittent peritoneal dialysis as a bridging therapy while seven were still on 2-weekly haemodialysis upon completion of this study. 5 deaths were recorded during the study. The median duration of 2-weekly bridging haemodialysis before switching to a more regular temporary dialysis (two to three times weekly) or to definitive RRT was 48 days (SD 3.126). Meanwhile, the overall survival rates at 1, 6, and 12 months were 95.9%, 93.3% and 85.0% respectively. Median survival of these patients was more than 15 months.

CONCLUSIONS:

2-weekly haemodialysis may provide a good bridging method before receiving definitive RRT as it has a high survival rate. However it can only be done as a temporary measure within a short time period.

Session: Poster

Topic: MSN - Hemodialysis

Abstract ID: 136

A DESCRIPTIVE ANALYSIS OF PATIENTS ON 2-WEEKLY BRIDGING HAEMODIALYSIS

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INTRODUCTION AND AIMS:

2-weekly haemodialysis has been offered by HRPZII as a bridging option for those ESRD patients who are contraindicated to or failed intermittent peritoneal dialysis while waiting for long term renal replacement therapy to be established. This study evaluates the demographic and clinical characteristics of ESRD patient receiving 2-weekly haemodialysis.

METHODS:

A retrospective cohort study was performed by Nephrology Department HRPZII from January 2018 until March 2019. Data collected from medical records in HRPZII and Pasir Mas Hospital was subjected to a descriptive analysis, using SPSS version 20.0. Demographic characteristics and categorical variables were respectively presented as frequencies(n) and percentage(%). Continuous variables were expressed as mean and SD where appropriate.

RESULTS:

A total of 49 patients were identified, consisting of females 26 (53%) and males 23 (47%). The mean age was 49 years (SD 14.576) ranging from 20 to 77 years. Of these, hypertension is present in 91.8%, DM in 65.3%, IHD in 26.5% and CVA in 6.1%. Majority of them had history of multiple femoral catheter (FC) insertion (mean 1.94 number of insertion) prior to internal jugular catheter (IJC) insertion. 38.8% (n=19) had prior history of failed bridging intermittent peritoneal dialysis. Median duration of bridging HD was 47 days (SD 3.898). 22% (n=11) had IJC related complication with CRBSI/ESI. Out of five recorded deaths, three were due to sepsis (lower limb necrotizing fasciitis, pneumonia and CRBSI respectively), one from acute coronary syndrome and the last patient died at home due to undetermined cause.

CONCLUSIONS:

This study suggested an equal distribution between males and females receiving bridging HD. Majority were middle aged, have hypertension or DM. We observed high rate of CRBSI/ESI. Five deaths were recorded. Further study is needed to assess the long term outcome of such patients.

Session: Poster

Topic: MSN - Hemodialysis

Abstract ID: 138

RIGHT ROUTE WRONG DESTINATION. CASE REPORTS ON INTERNAL JUGULAR VEIN CATHETER MALPOSITION

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INTRODUCTION AND AIMS:

Malposition of the internal jugular catheter (IJC) is a relatively common complication (5.01%) (Lin Wang et al). Serious complications of this procedure include haematoma, heart perforation and even death. With the increased success rate of catheter placements under ultrasound (US) guidance, use of this modality has been strongly advocated. However, limitations are still present and thus, usage of ultrasound may not ameliorate the risk of complications completely.

METHODS:

These are case reports of 3 ERSO patients who underwent US-guided IJC placement between January 2016 to December 2018.

RESULTS:

The first case was a 49-year-old male, whose IJC was inserted into the right atrium through superior vena cava. The second case was a 66-year-old lady, with the IJC inserted into the right accessory vein. The third case involved a 67-year-old man, having IJC inserted into left IJV, however became complicated with a malposition upwards to the right sigmoid sinus. All IJC malpositions were confirmed by chest x-ray. Except for the third case who developed a haematoma, the others did not develop further sequelae. Subsequently, all cases underwent uneventful removal of IJC.

CONCLUSIONS:

Malposition of IJC is a common complication, which can still occur even with ultrasound guidance. Further studies need to be done, to identify the best method to ensure correct placement of IJC after ultrasound guidance.

Session: Poster

Topic: MSN - Hemodialysis

Abstract ID: 139

COLLABORATIVE QUALITY ASSESSMENT PROGRAMME AMONGST HAEMODIALYSIS CENTRES IN KINTA VALLEY A PILOT PROJECT

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INTRODUCTION AND AIMS:

We initiated a regional quality assessment programme and invited participation of all haemodialysis (HD) centres in Kinta Valley. We aimed to study the catheter-related blood stream infection (CRBSI), admission and mortality rates. The primary goals of the programme were to develop standardised audit tools, assist monitoring of outcomes in dialysis care and promote quality improvement at the local facility.

METHODS:

Standardised audit forms were created. Audit was done monthly by the HD staffs. Analysed data was shared with all participating centres.

RESULTS:

Eight centres (1 public hospital, 1 private hospital, 2 non-government organizations and 4 stand-alone) participated voluntarily. A total of 706 patients were followed up from January to December 2018. The percentage of patients using catheters as dialysis access in each centre ranged from 12.1% to 28.4%. There was a variation of CRBSI rates in different centres, from 0 to 7.9 in 1000 catheter days. Five of 8 centres achieved the current recommended standard of 1 in 1000 catheter days. The most common organisms were Methicillin-resistant coagulase negative organisms (16.3%), followed by *Enterococcus faecalis* (14%). *Staphylococcus aureus*, *Klebsiella pneumoniae* and *Sternotrophomonas maltophilia* were isolated in 11.6% of cases. The overall monthly all-cause admission rate was 6.9%, ranging from 5.0% to 10.3% per centre. The median length of stay was 4.5 days. The annual mortality rates varied from 8.7% to 21.6%, giving a mean

of 14.6%. Infection (34.6%, primarily pneumonia) was the commonest cause of death. Death from cardiovascular disease was 23.5%, and there were 18.5% of patients died at home.

CONCLUSIONS:

We hope to encourage and instil a culture of ongoing, continuous quality surveillance in all centres and this audit will provide a springboard for further improvement as each centre will be able to look into respective areas in need of improvement.

Session: Oral

Topic: MSN - Hemodialysis

Abstract ID: 140

OUTCOME OF PATIENTS WITH ASYMPTOMATIC HEMATURIA AND/OR PROTEINURIA

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INTRODUCTION AND AIMS:

Asymptomatic urinary abnormalities in adults are relatively common. Proteinuria and/or hematuria are often the initial presentation of glomerular disease. Asymptomatic hematuria with or without proteinuria of less than 1g/day and normal kidney function usually carries good prognosis and renal biopsy is rarely needed.

METHODS:

This is a retrospective observational study. 2736 new cases presented to nephrology clinic from 1st January 2006 until 31st December 2009 were screened and all new patients with asymptomatic hematuria and/or proteinuria less than 1g/day were reviewed. Demographic and clinical data were obtained from electronic medical record up to 31st December 2018.

RESULTS:

33 (23 female, 10 male) patients with asymptomatic hematuria and/or proteinuria (21 hematuria, 4 proteinuria, 8 with hematuria and proteinuria) were included. Mean age was 35 ± 13 years. Mean duration of follow-up was 57 months. Creatinine at presentation was 72.6 ± 17 $\mu\text{mol/L}$ with estimated glomerular filtration rate of 103 ± 21 ml/min/1.73m². None at 5 years, and 2 out of 7 at 10 years follow-up showed progression of chronic kidney disease. None required renal replacement therapy and no mortality was reported. Only 1 patient had renal biopsy and it showed focal segmental glomerulosclerosis. 16 patients have persistent hematuria, 4 persistent proteinuria, 7 persistent hematuria and proteinuria at the end of follow-up. ACEi/ARB were used in 27.3% of patients.

CONCLUSIONS:

Most patients especially those with proteinuria have persistent urinary abnormalities. Asymptomatic hematuria and/or proteinuria with normal kidney function usually run a benign course however follow up is needed as a small percentage showed progression of chronic kidney disease. Renal biopsy is not indicated if proteinuria less than 1g/day and have normal kidney function. Larger pool of patients is needed for further analysis.

Session: Oral

Topic: MSN - Glomerulonephritis

Abstract ID: 143

EPIDEMIOLOGY AND CLINICAL CHARACTERISTICS OF IDIOPATHIC MEMBRANOUS NEPHROPATHY- A SINGLE CENTRE STUDY OF MULTIETHNIC MALAYSIAN PATIENTS

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INTRODUCTION AND AIMS:

Idiopathic membranous nephropathy (IMN) is one of the leading causes of nephrotic syndrome in adults. It has variable disease outcomes and may lead to end stage renal failure. Knowledge of its epidemiology and clinical characteristics will help strengthen our understanding of the disease in this region as most literature on IMN revolves around the Caucasian population.

METHODS:

A retrospective, cross sectional study was done on all patients diagnosed with IMN between January 2011 to December 2017 and followed up under the Department of Nephrology, Hospital Kuala Lumpur.

RESULTS:

A total of 30 patients with IMN were identified. Out of these, 60% of patients were male. The mean age was 49.7 ± 15.2 years. A multi ethnic cohort of patients was represented in the study consisting of 13 (43.3%) Malays, 9 (30%) Chinese and 7 (23.3%) Indians. The majority of patients (90%) presented with nephrotic syndrome on diagnosis. Of the 14 IMN patients who had a serum phospholipase A2-receptor antibody (anti-PLA2R) taken during presentation, only 8 (57%) were positive. All patients received at least one renin-angiotensin-aldosterone system (RAAS) blockade. Only 8 (26.7%) patients received intensified RAAS blockade. Almost 70% of patients were initiated some form of immunosuppressive therapy. 22 patients

were followed through till year 2019 while 8 patients defaulted midway. A total of 20 patients (90.9%) achieved remission (either complete or partial remission). In terms of long term outcomes, 3 patients had doubling of serum creatinine of which 1 became dialysis dependent.

CONCLUSIONS:

The epidemiology and clinical characteristics of IMN appears similar to that of the Caucasian population. The prognosis of IMN is excellent with majority attaining remission. Limitations of the study are the relatively small sample size and the short duration of the study.

Session: Poster

Topic: MSN - Glomerulonephritis

Abstract ID: 144

HIV INFECTED PATIENTS ON PERITONEAL DIALYSIS A SINGLE CENTRE EXPERIENCE

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¹ Serdang Hospital

INTRODUCTION AND AIMS:

Annually, the number of individuals infected with Human Immunodeficiency Virus (HIV) has been on the rise. Six to 10% of HIV infected patients have been reported to develop renal complications, of which about 50% end up with end stage renal disease (ESRD)

METHODS:

A single-centre retrospective study, evaluating all patients on peritoneal dialysis with seropositive HIV infection from 2006 to 2019 in Serdang Hospital. We included patients who tested positive for HIV antibody with enzyme immunoassay (ELISA) and performed beyond 4 weeks of PD therapy at home.

RESULTS:

Our CAPD unit cared for a total of 949 patients from March 2006 to April 2019. During this period, 12 HIV infected patients performed peritoneal dialysis with mean age of 45.7 ± 9.8 years, of which 75% were male, 50% diabetic, 83.3% hypertensive and 66.6% with ischemic heart disease. Five patients were on APD while the other 7 were on CAPD. Two patients underwent renal biopsy. Pathological findings were both consistent with segmental and global glomerulosclerosis with interstitial nephritis. One biopsy revealed an additional finding of papillary adenoma. Average technique survival and patient survival is 871.3 and 879.0 days respectively. Peritonitis rate was 24.9 patient months/episode and average duration of hospital admission was 37.4 days. By 1st May 2019, 2 patients converted to HD at private HD centre, 1 patient underwent renal transplant and 7 of the 12 patients passed away. At one and two years, the cumulative technique survival was 71.4% and 57.1%, respectively. Three patients remain on PD, under our follow up.

CONCLUSIONS:

Contrary to previous studies, we have experienced less PD related complications and respectable overall survival of HIV infected patients on PD.

Session: Poster

Topic: MSN - Peritoneal Dialysis

Abstract ID: 147

A CASE SERIES OF SEVERE METASTATIC CALCIFICATION IN DIALYSIS PATIENTS

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INTRODUCTION AND AIMS:

Secondary renal hyperparathyroidism is a common complication of end stage kidney disease but severe calcification i.e. tumoral calcinosis, calciphylaxis and visceral calcification are uncommon. They are often difficult to treat and is associated with high morbidity and mortality.

METHODS:

We report three cases that illustrates its clinical presentation, diagnosis, therapeutic approach and outcome.

RESULTS:

All three patients were obese female on peritoneal dialysis, with median BMI of 35.6 (35.1-39.3) kg/m² and the age of 32-, 42- and 61-years old, respectively. The median duration of renal replacement therapy initiation until symptoms presentation was 49 (27-51) months. Case 3 has diabetes mellitus and none was on warfarin. Case 1 presented with right thigh calciphylaxis and tumoral calcinosis of right thumb; case 2 with tumoral calcinosis of right clavicle, left elbow, left middle and ring fingers; and case 3 with extraosseous calcification and calciphylaxis of both legs up to the knee level. At presentation, the median serum calcium and phosphorus product level was 1.99 (1.53-5.83) mg²/dL², serum alkaline phosphatase level was 124 (72-515) U/L and intact parathyroid hormone level was 418 (279.1-734.8) ng/L. All cases underwent total parathyroidectomy. Case 1 achieved complete resolution of the lesions over 1 year. Case 2 was treated additionally with sodium thiosulphate and the lesions regressed over 3 months. Both case 1 and case 2 had changed the dialysis modality to hemodialysis. Case 3 succumbed to pancreatitis complicated with gastrointestinal bleed due to severe erosive esophagoduodenitis.

CONCLUSIONS:

The biochemical markers of CKD-MBD alone may not correlate with this complication. Recognising the clinical signs is therefore crucial in making early diagnosis to provide prompt treatment which may possibly prevent devastating outcome.

Session: Poster

Topic: MSN - Mineral Bone Disease

Abstract ID: 148

SUCCESSFUL HCV TREATMENT AND SUBSEQUENT ISOLATION PRACTICE PATTERNS IN HAEMODIALYSIS UNITS: A CASE SERIES

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INTRODUCTION AND AIMS:

Hepatitis C (HCV) infection is related to increase morbidity and mortality in haemodialysis (HD) patients. Treatment approach to HCV infection has changed drastically over the past decade from interferon/ribavirin to direct-acting antivirals (DAAs) with improvement of sustained virologic response (SVR) rates to >95%. In Malaysia, treatment of potential eligible dialysis subjects was hampered by the limited facility doing HCV RNA testing, non-readily available of DAAs in Ministry of Health hospital formulary and the insurmountable drug cost.

METHODS:

We described the demographics and outcome of 7 HD patients with HCV infection who achieved SVR post antiviral treatment. These cases were reported voluntarily by nephrologists in the Ministry of Health, Malaysia during an ad hoc survey.

RESULTS:

4 subjects were females. This cohort has a mean age (SD) of 47 ±7 years old, affected by HCV genotype 1b (n=3) and genotype 3a (n=4). The mean (range) of duration on HD and duration of HCV infection until SVR were 13 (7-21) and 14 (10-21) years respectively. All subjects with genotype 1b achieved SVR post DAAs (ombitasvir/paritaprevir/ritonavir/dasabuvir), of which 2 subjects had prior treatment failure with interferon/ribavirin. Half of the 4 subjects with genotype 3a achieved SVR with interferon/ribavirin and DAAs (glecaprevir/pibrentasvir)

respectively. All subjects remained on single-use dialyzer. 5 subjects remained isolated and continued using HCV designated machines during first shift (except one on third shift) post SVR. 2 cases however migrated to common area and performed HD during the last shift.

CONCLUSIONS:

The achievement of SVR is critical in order to prevent hepatic and extrahepatic complications. There is variation in post SVR isolation practice in HD units, which may unnecessarily increase the risk of reinfection in patients with SVR if they remained isolated in HCV zone. A local consensus is needed to deal with subjects with SVR.

Session: Oral

Topic: MSN – Hemodialysis

Abstract ID: 149

IS THERE ANY ASSOCIATION BETWEEN HYPOCALCEMIA, HYPERPHOSPHATEMIA AND HYPERKALEMIA AND RENAL DECLINE?

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INTRODUCTION AND AIMS:

The human body is in a state of constant flux of biochemical changes to maintain a healthy body state. However, there is limited data on whether these fluctuations influence renal decline.

Objective: We aim to determine the correlation between these electrolytes with renal outcomes and mortality.

METHODS:

An ambispective study was conducted in the nephrology clinic, Serdang Hospital. 82 patients were followed up from January 2007 until March 2019. This research is registered under NMRR-18-866-41231. Pearson correlation and multivariate analysis were used for analysis of associations of these electrolytes with eGFR decline. Kaplan-Meier was used to analyze the renal outcomes, which is halving of eGFR, doubling serum creatinine and need for renal replacement therapy (RRT) and mortality. P (<0.05) is determine as significant.

RESULTS:

There is significant correlation on renal decline with hyperkalemia ($r= 0.43$, $p < 0.000$) and super-hyperkalemia ($r= 0.325$, $p < 0.003$). Multiple regression predict renal decline from different model. 1st: Hyperkalemia F (1, 79) = 17.784, $p = 0.000$, $R^2 = 0.184$. 2nd: Hyperkalemia, Gender F (2, 78) = 13.850, $p = .000$, $R^2 = 0.262$. 3rd: Hyperkalemia, Gender and Hyperphosphatemia F (3, 77) = 14.435, $p = .000$, $R^2 = 0.360$. Kaplan Meier analysis showed significant results in hypocalcemia (50% of eGFR decline, $p= 0.000$ and RRT, $p= 0.049$), hyperphosphatemia (50% of eGFR decline, $p= 0.02$) and hyperkalemia

(50% of eGFR decline, $p= 0.02$ and mortality, $p= 0.01$). Cox regression analysis showed an overall significant association between different covariate and the doubling of serum creatinine ($p = 0.006$) and eGFR decline ($p = 0.02$) but not on other renal outcome and mortality.

CONCLUSIONS:

These electrolytes are associated with worsening in renal function. But, further analysis with a wider scope and a larger sample is needed to provide more information on how these electrolytes impact renal function.

Session: Oral

Topic: MSN - Others

Abstract ID: 151

DOES THE INFLAMMATORY MARKER NEUTROPHIL-TO-LYMPHOCYTE RATIO PREDICTS MORTALITY AND RENAL DECLINE?

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INTRODUCTION AND AIMS:

Neutrophil-to-lymphocyte ratio (NLR) is an emerging inflammatory marker for inflammatory diseases, cardiovascular disease, and infections. Studies have reported that NLR markers correlates significantly with end-stage renal disease, dialysis and diabetic nephropathy.

Objective: To determine the association and correlation of NLR with co-morbidities and different renal outcomes.

METHODS:

An ambispective study was conducted in the nephrology clinic, Serdang Hospital. 208 patients were followed up from 2007 until March 2019. This research is registered under NMRR-18-866-41231. Univariate and multivariate analysis with different covariates were used to analyse the correlation and associations of NLR with eGFR decline. Kaplan-Meier survival curves were used to analyse the renal outcomes, namely halving of eGFR, doubling serum creatinine and need for renal replacement therapy (RRT) and mortality.

RESULTS:

In the univariate analysis, the presence of congestive cardiac failure (CCF) ($p = 0.024$), renal transplantation ($p = 0.032$), total cholesterol ($p = 0.019$) and elevated serum creatinine ($p = 0.031$) are associated with higher NLR values. High NLR correlates with hypercholesterolemia ($r = 0.156$ $p = 0.024$), CCF ($r = 0.156$ $p = 0.024$), renal transplantation ($r = 0.149$ $p = 0.032$) but not on the eGFR decline. There was no significant association of NLR in renal decline with multiple covariates through multivariate analysis. Kaplan Meier analysis showed a significant association with RRT ($p = 0.030$), doubling of serum creatinine ($p = 0.066$) and mortality ($p = 0.09$). Cox regression analysis showed an

overall significant association between different covariates and halving of eGFR ($p = 0.008$) and RRT ($p = 0.031$) but not on other renal outcome or mortality.

CONCLUSIONS:

Elevated NLR appears to be elevated in certain co-morbidities and is predictive of worsening of renal function or requirement of RRT. Multi-centered analysis with a larger population is needed to provide a better result and information in this area.

Session: Oral

Topic: MSN - Others

Abstract ID: 153

OUTCOMES OF BUTTONHOLE CANNULATION IN OUTPATIENT HEMODIALYSIS: SINGLE CENTRE EXPERIENCE

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INTRODUCTION AND AIMS:

Arteriovenous fistula (AVF) is the preferred option for vascular access for hemodialysis. Buttonhole cannulation technique is an alternative to rope ladder or area cannulation. The buttonhole technique is a cannulation method that uses the same location, angle, and depth repeatedly using blunt needles. Hospital Sultan Abdul Halim (HSAH) initiated buttonhole needling (Nipro biohole needle size 16G) for patients on regular hemodialysis since May 2017. All patients used polycarbonate peg to create tunnel tract for buttonhole cannulation. This study explored the consequences of buttonhole cannulation on infection and fistula survival of the patients.

METHODS:

A single center clinical trial with no-treatment control group study design involving end stage kidney disease (ESRD) patients on regular hemodialysis using buttonhole cannulation technique at HSAH, evaluating local or systemic infection and any fistula intervention or failure. Systemic infection was defined as at least 1 positive blood culture with definite or probable association with infection secondary to the AVF. Localized infection defined as erythema, pus, or swelling at fistula site. AVF failure was defined as an AVF no longer used for hemodialysis

RESULTS:

Mean and SD of the patients variables were age 49.2 (18.4) year, dialysis vintage 83.6 (75.2) months, age of fistula 143.7(433.1) months and duration on buttonhole cannulation 12.7 (5.8) months. There were 23 patients who used buttonhole cannulation technique. Main cause of ESRD among patients are either diabetes mellitus,

hypertension or both (n=15). Three patients had hepatitis B . Two patients had hepatitis C. The commonest type of fistula in this group of patients was left radiocephalic (n=7). There was 1 localized infection at 1 week, with no infections documented thereafter. There were 3 AVF failure and 1 AVF needing intervention (fistuloplasty).

CONCLUSIONS:

Buttonhole cannulation is safe with low infection risk. With regards to AVF failure, further study is required.

Session: Poster

Topic: MSN - Hemodialysis

Abstract ID: 156

SURVIVAL OUTCOME OF PERITONEAL DIALYSIS CATHETER INSERTION VIA SELDINGER AND PERITONEOSCOPE A 1 YEAR FOLLOW UP

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INTRODUCTION AND AIMS:

Multiple methods of peritoneal dialysis (PD) catheter insertion by nephrologists have previously been reported e.g. peritoneoscope, Seldinger, percutaneous and mini-laparoscopic. In Serdang Hospital, we practice both peritoneoscopic and Seldinger technique to increase peritoneal dialysis initiation.

Objective: To evaluate 1-year survival outcome of PD catheters insertion using Seldinger technique and peritoneoscopic method; an extension from a previous study.

METHODS:

A retrospective review of all PD catheter insertion by nephrologists in 2017 and 2018 with minimum of 1 year follow up was done. Records were obtained from the hospital eHIS system.

RESULTS:

A total of 208 patients underwent PD catheter insertion, with 122 patients via peritoneoscopic and 86 via Seldinger method. Out of the cohort, 47 patients had previous abdominal scars and all of them were inserted peritoneoscopically. There was no significant difference in age, gender or underlying diabetes mellitus between the 2 groups. Regardless of the methods, good dialysate flow in and out was observed immediately post insertion in more than 97% of the cases. The Kaplan Meier survival analysis at 1 year showed no significant difference between Seldinger or peritoneoscopic method. The occurrence of bleeding and infections were similar in both methods (p=NS).

CONCLUSIONS:

Regardless of the chosen methods, both catheter insertion techniques have similar survival outcome up to 1 year. Therefore, it is at the discretion of the nephrologists to choose the preferred technique that they are most familiar with.

Session: Oral

Topic: MSN - Peritoneal Dialysis

Abstract ID: 159

PHOSPHOLIPASE A2 RECEPTOR ANTIBODY AMONG MEMBRANOUS NEPHROPATHY (MN) PATIENTS IN UNIVERSITY MALAYA MEDICAL CENTRE (UMMC)

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INTRODUCTION AND AIMS:

Phospholipase A2 Receptor is the major target antigen in primary MN and is present in 70% of primary membranous nephropathy but not in secondary membranous nephropathy. However some studies detected PLA2R in secondary MN patients.

METHODS:

This is a cross-sectional observational study. The objective is to determine the prevalence of PLA2R antibodies among MN patients in UMMC. Patients were recruited from UMMC and UMSC from 1/3/2017 till 28//2019. Patients with histological diagnosis of membranous nephropathy were included. End stage kidney disease patients were excluded. Anti-PLA2R was taken at point of contact. Laboratory parameters and treatment regimes were collected.

RESULTS:

Total number of membranous nephropathy patients were 50 (n=50). Twelve were new idiopathic membranous nephropathy (IMN) (n=12, 24%), twenty-one treated IMN (n=21, 42%) and seventeen secondary membranous nephropathies (n=17, 34%). Median urine PCR for IMN group was 531mg/mmol, treated IMN group was 93.80mg/mmol and secondary MN was 118mg/mol. For serum albumin, median for IMN group was 23g/L, treated IMN group was 37g/L and secondary MN group was 33g/L. IMN group has median serum creatinine of 85umol/L, treated IMN 77umol/L and secondary MN 56umol/L.

PLA2R was positive in 7/12 IMN patients (58%). In IMN patients with nephrotic syndrome (UPCR >350mg/mol and serum albumin <30g/L) PLA2R was positive in 5/7 patients (71%). Interestingly, 2/17 (12%) of our secondary MN patients has PLA2R positive. One was a lupus nephritis class V patient and the other was membranous nephropathy due to ovarian cancer. In the treated IMN group 2/19 (9.5%) patients was PLA2R positive. One patient was still in nephrotic syndrome while the other patient was in complete remission after cyclophosphamide and prednisolone regime.

CONCLUSIONS:

71% of nephrotic IMN patients in our center are PLA2R positive but it PLA2R was also detected in 2 secondary MN patients.

Session: Poster

Topic: MSN - Glomerulonephritis

Abstract ID: 160

CONTINUOUS QUALITY IMPROVEMENT IMPLEMENTATION (CQI) TO REDUCE CULTURE NEGATIVE PERITONITIS

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INTRODUCTION AND AIMS:

Peritoneal dialysis (PD) related peritonitis remains a major complication and is directly associated with technique survival of the modality. One of the challenges is making early diagnosis by detecting positive organism for peritonitis. ISPD guideline recommends culture negative peritonitis less than 20%. We noticed surge in culture negative peritonitis in our center. We aimed to implement a CQI (Continuous Quality Improvement) program to tackle this issue.

METHODS:

Patients presented with signs and symptoms of PD peritonitis fulfilling ISPD criteria for PD peritonitis were reviewed. Patients were attended by PD Nurse within 1 hour in PD Unit upon presentation. Sample PD fluid will be spun instantly in PD unit via centrifuge at 3000 RPM for 30 min. Spin specimens were sent in two culture bottles to laboratory. Intraperitoneal antibiotic if not contraindicated started for patients. This was prospective cohort study comparing PD patients pre-implementation CQI from (October to December 2018) and patients post-implementation CQI (January to March 2019).

RESULTS:

Total of 20 patients for pre-implementation group and 15 patients post-implementation were included. For both groups, mean age were 57.5 ± 8.27 years and 55.15 ± 3.64 years respectively, $p=0.53$. In pre-implementation group vs post-implementation group, the primary diseases were Diabetes Mellitus 80% vs 85.7%, hypertension 10% vs 7%, obstructive uropathy 5% vs 0%, glomerulonephritis 0% vs 7% and unknown causes 5% vs 0%, $p=0.62$.

In pre-implementation group, 70% had negative PD peritonitis, while in post-implementation group 42.8% had negative PD peritonitis, $p=0.11$. There was no difference between pre-implementation group versus post-implementation group in terms of response to antibiotic (75% vs 71.4%), catheter removal (20% vs 21.4%) and rate of relapse (5% vs 7%).

CONCLUSIONS:

There was a reduction of negative PD culture between pre and post-implementation CQI. Limitation in this study was short duration and small sample size population to derive significant results.

Session: Poster

Topic: MSN - Peritoneal Dialysis

Abstract ID: 168

EFFICACY OF LYTIC THERAPY IN CUFFED TUNNELLED HAEMODIALYSIS CATHETERS: UROKINASE (UPA) VERSUS RECOMBINANT T PLASMINOGEN ACTIVATOR (TPA)

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INTRODUCTION AND AIMS:

Cuffed tunnelled haemodialysis (HD) catheters are used increasingly due to large number of diabetic patients and increasing age of our dialysis population. One major problem with its use is suboptimal blood flow or thrombosis resulting in interruption of HD treatment or inadequate dialysis. Lytic therapy can be effective in restoring blood flow and allowing dialysis to be performed immediately and reduce the need for change of catheters.

Objective: To evaluate the success rate of lytic therapy in catheter malfunction and compare the efficacy between uPA and tPA.

METHODS:

This is a retrospective cohort analysis of all 84 HD patients dialysed via cuffed tunnelled HD catheter who underwent lytic therapy in our centre from 2012 to April 2019. Lytic therapy was considered successful if flow was able to be restored and maintained at $Q_b \geq 300\text{ml/}$. The results were analysed using SPSS version 22.

RESULTS:

During the study period, there were 84 patients with cuffed tunnelled HD catheter who underwent a total of 145 lytic therapies due to catheter malfunction. Of these, 54.8% were male and 45.2% female. Lytic agents used included urokinase (49%), alteplase (37.9%), tenecteplase (11.7%) and others. The overall success rate with single instillation of lytic therapy was 95.9%. The success rate with single instillation was highest with alteplase (100%), followed by urokinase (94.0%) and tenecteplase (93.8%).

However, majority of patients (46.9%) required additional lytic agent instillation within 4-months of follow up. The

need for further intervention was highest with Urokinase (53.5%), followed by alteplase (43.6%) and tenecteplase (35.3%). There were no serious adverse events with any of these agents. In this study, tPA is significantly more effective than uPA in restoring catheter function ($p=0.004$).

CONCLUSIONS:

Lytic therapy is a safe and effective way to salvage and maintain cuffed tunnelled catheter function in our local setting.

Session: Oral

Topic: MSN - Hemodialysis

Abstract ID: 171

PERITONEAL DIALYSIS CATHETER SURVIVAL IN PATIENTS WITH PREVIOUS ABDOMINAL SURGERY

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INTRODUCTION AND AIMS:

Percutaneous PD catheter insertion is the preferred and well established method for initiating peritoneal dialysis (PD). However, it is seldom practised in patients with history of abdominal surgery. The utilisation of peritoneoscope by nephrologists has allowed direct visualisation of the peritoneal cavity and thus allowed timely insertion of PD catheter in patients with previous abdominal surgery who traditionally had to wait for surgical intervention/insertion.

Objective: To evaluate the outcome of PD catheter inserted via peritoneoscope in patients with previous abdominal surgery by nephrologists.

METHODS:

All patients who underwent PD catheter insertion via peritoneoscope in 2017 and 2018 were followed up for minimum of 1-year. Records were obtained from the hospital eHIS system.

RESULTS:

A total of 122 patients underwent PD catheter insertion via peritoneoscope. 47 (38.5%) patients had previous abdominal surgery while 75 (61.4%) had native abdomen. 16 (13.1%) patients had previous PD catheter insertion, 11 (9%) had caesarean sections, 3 (2.4%) had laparotomies, 6 (4.9%) underwent appendicectomy and 11 (9%) had history of other abdominal procedures (cholecystectomy, hernia repair etc). There was no significant difference in baseline demographics. Two episodes of perforation were documented in patients with previous abdominal scar. There was no significant difference in 1-year PD catheter flow survival for both groups.

CONCLUSIONS:

We have shown that patients with previous abdominal surgery whom have been individually screened by nephrologists can undergo PD catheter insertion via peritoneoscope technique with good outcome. Successful PD catheter insertion in this group can shorten hospitalisation and reduce the medical cost that would otherwise incurred if the patients had to undergo surgical PD catheter insertion via mini laparotomy or laparoscopy.

Session: Poster

Topic: MSN - Peritoneal Dialysis

Abstract ID: 172

COMPARISON OF SURVIVAL BETWEEN WITHHOLDING AND WITHDRAWAL OF DIALYSIS IN END STAGE RENAL DISEASE PATIENTS WHO CHOSE PALLIATIVE CARE IN HOSPITAL SULTANAH BAHYAH(HSB).

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INTRODUCTION AND AIMS:

There is a rising importance of providing palliative care (PC) when managing end stage renal disease (ESRD). This study examines the survival between withholding and withdrawal of dialysis in ESRD who chose PC.

METHODS:

A single-center retrospective observational study of 23 ESRD patients who chose PC from January 2018 to March 2019 in HSB. Datasets of demographic, clinical, laboratory and survival outcome were obtained from patient electronic medical record in the hospital information system (eHis).

RESULTS:

This cohort included 23 patients, predominantly male (73.9%). Mean age was 71.7 ± 11.09 years. Mean eGFR was 7.57 ± 4.23 ml/min/1.73m². The main race that opted for PC was Malay (87%) followed by Chinese (8.7%) and Siamese (4.3%). Our patients mostly had diabetes mellitus (60.9%, n=14), cerebrovascular accident (30.4%, n=7) and malignancy (13%, n= 3). Majority of patients were on hemodialysis 60.9% (n=14) and peritoneal dialysis (PD) 8.7% (n=2), whereas 30.7% (n=7) were dialysis naive. Mean dialysis vintage for hemodialysis and PD were 1042 ± 1547 and 913 ± 774 days respectively. Duration of palliative clinics follow-up were 15 ± 16 days.

The reasons for choosing PC for dialysis naive patients were poor prognosis (43%), patient preference (28.5%) or both patient preference and poor prognosis (28.5%); whereas for those on regular dialysis before, the reasons for choosing PC were poor prognosis (62.5%), patient preference (6.25%), both patient preference and poor prognosis (6.25%), exhausted access (12.5%), and poor

social support (12.5%). 21.7% of patients (n=5) survived at the end of the study. The median duration of survival for palliative ESRD patients was 7 days (95% CI 1.93 - 12.07). 30-Days Survival was 22.2%. There was no significant difference in the mean survival duration between dialysis naive patients compared to those who were on regular dialysis before opted for PC (12.9 ± 13.2 days vs 14.9 ± 14.6 days, p=0.86).

CONCLUSIONS:

Withholding or withdrawal of dialysis has no difference in mean survival duration. This suggests that conservative management with good palliative team support in carefully chosen patients who have poor prognosis may alleviate the patients' suffering and burden of dialysis to the family and society at large.

Session: Poster

Topic: MSN – Others

Abstract ID: 165

CASE REPORT: PAINLESS BILATERAL SHOULDER SWELLING

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METHODS:

Case report

RESULTS:

A 22 year-old male peritoneal dialysis (PD) patient presented with painless bilateral shoulder swelling for 4 months. It progressively extended to his right wrist associated with numbness and restriction in movement. There was no history of trauma. He developed end stage renal disease in 2015 secondary to unknown primary disease. He performed 4 PD exchanges daily and had low average peritoneal transport membrane type. His dialysis adequacy (Kt/V) was 2.12.

On examination, he had diffuse swelling over bilateral shoulder and right wrist. There was no erythema, tenderness or ulceration of the skin. Range of movement was reduced over all planes. His serial blood investigations revealed persistently elevated serum calcium ranging 2.5 - 2.62mmol/L and serum phosphate 2.70 - 3.03mmol/L.

X-ray of his shoulder and wrist joints revealed extensive soft tissue calcifications.

Photo1: Bilateral shoulder joint swelling.

Photo2: Right wrist joint swelling.

Photo3: Diffuse radio-opaque shadow over both shoulder joint.

Photo4: Radio-opaque shadow over right wrist joint.

He was on Sevelamer 800mg TDS as his phosphate binder. He admitted that he had not been compliant to his phosphate binders. He was counselled on compliance and started on cinacalcet 25mg OD and Sevelamer dosage was increased. One month later, he developed painful right wrist swelling. Clinically, the right wrist was warm, tender and inflamed. He was treated as infected right wrist joint. He was given intravenous antibiotics and underwent incision and drainage of right wrist. Surgery revealed extensive calcium deposit in the soft tissue and it was removed. He was discharged after completion of antibiotics.

CONCLUSIONS:

CKD-MBD is a well known complication ESRF. Poorly controlled CKD-MBD among ESRF patients can cause extensive soft tissue and vascular calcification leading to significant morbidity and mortality. Patient education and compliance to treatment is the main stay of treatment to reduce the disease burden and complications.

Session: Poster

Topic: MSN - Mineral Bone Disease

Abstract ID: 170

WARFARIN RELATED NEPHROPATHY : THE NEW KID ON THE BLOCK

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INTRODUCTION AND AIMS:

Warfarin Related Nephropathy is a significant complication of anticoagulation treatment among chronic kidney patients with atrial fibrillation. It has been associated with the acceleration of renal progression as well as increased the risk of mortality in a susceptible patient. Despite the well-described clinical entity, the clinical course of warfarin-induced nephropathy still underdiagnosed. We described a case of acute on chronic kidney disease related to over anticoagulation treatment.

METHODS:

Case report

RESULTS:

A 75-year-old lady with stage 4 CKD, diabetes, hypertension and recently diagnosed atrial fibrillation in March 2019 was found to be over anticoagulated [international normal ratio (INR) of 14.63] during a routine follow up. The serum creatinine was noted to be elevated at 460 μmol/L, a two-fold increase from her last measured serum creatinine of 205 μmol/L in early April. Urine microscopy revealed microscopic haematuria and ultrasonography showed bilateral parenchymal disease with no evidence of urinary calculi or obstruction respectively. Unfortunately, the patient refused both renal biopsy and warfarin. The over anti-coagulation was corrected with fresh frozen plasma immediately and INR was corrected to 1.2. Subsequent follow up 2 weeks post event showed a reduction of serum

creatinine to 246 μmol/L, with no evidence of microscopic haematuria in the urine upon discontinuation the warfarin.

Serum creatinine

15/4/2019 : 205 μmol/L

25/4/2019 : 460 μmol/L

11/5/2019 : 246 μmol/L

CONCLUSIONS:

Acute kidney failure associated with warfarin overdose should raise high suspicious of warfarin-related nephropathy. Early recognition of this newly recognized acute kidney syndrome with prompt correction of abnormal coagulation is crucial in order to improve the outcome.

Session: Poster

Topic: MSN - Others

Abstract ID: 174

CEREBRAL TOXOPLASMOSIS: THE GREAT MIMICKER

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INTRODUCTION AND AIMS:

Cerebral toxoplasmosis is a rare presentation in systemic lupus erythematosus (SLE). We report a case of cerebral toxoplasmosis in SLE patient.

METHODS:

Case report

RESULTS:

A 36-year-old man with SLE mainly lupus nephritis and neuropsychiatric SLE (NPSLE) presented with an episode of generalised tonic-clonic seizure. He had no fever and neurological examinations were normal. Initial investigations showed TWC $9.9 \times 10^9/L$, CRP 0.28g/dl and ESR 19. Serum toxoplasma IgM/IgG and blood culture were negative. At presentation, he was on prednisolone 10 mg OD and mycophenolate sodium 720 mg BD. Differential diagnosis of relapse cerebral lupus was considered given the absence of fever, low CRP and normal leucocyte count. However, his CT brain showed multiple focal hypodense lesions with mass effect, and his MRI brain revealed multiple concentric target sign lesions suggestive of toxoplasmosis. Hence the diagnosis of cerebral toxoplasmosis was made. He was treated with trimethoprim-sulfamethoxazole. Two weeks after starting on treatment, the patient remained seizure free and repeated MRI brain showed a reduction in lesions size. The mycophenolate sodium was discontinued.

Toxoplasmosis is a life-threatening disease for immunocompromised patients. Cerebral toxoplasmosis usually presented with headache, confusion, and fever. Focal findings include focal seizures, ataxia, hemisensory loss, hemiparesis, and hemiplegia. Clinical manifestations of NPSLE and CNS infection in SLE are a mirror image of each other. Toxoplasma IgG/IgM is the serology tests

that commonly use in diagnosing cerebral toxoplasmosis. However, a negative serum IgG does not exclude a positive diagnosis. Radiology imaging is crucial in diagnosing cerebral toxoplasmosis when the serological testings are negative. The treatment of choice is pyrimethamine-sulfadiazine or trimethoprim-sulfamethoxazole or pyrimethamine-clindamycin combinations.

CONCLUSIONS: Differentiating NPSLE and CNS infection in SLE patient can be challenging. A combination of good clinical assessment, together with laboratory and radiological findings are crucial for diagnosis.

Session: Poster

Topic: MSN - Glomerulonephritis

Abstract ID: 176

A SINGLE CENTRE EXPERIENCE ON USE OF CINACALCET IN END STAGE RENAL DISEASE PATIENTS WITH SECONDARY HYPERPARATHYROIDISM

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INTRODUCTION AND AIMS:

Cinacalcet acts as calcimimetic by allosteric activation of the calcium-sensing receptor expressed in various human organs. Various studies have shown that Cinacalcet is effective in reducing Parathyroid Hormone (PTH) in Secondary Hyperparathyroidism (SHPT) in End Stage Renal Disease (ESRD). This study is aimed to evaluate the level of PTH reduction and other improvements in chronic kidney diseasemineral bone disease (CKD-MBD) biochemical markers by use of Cinacalcet in ESRD with SHPT.

METHODS:

This is a 1-year retrospective study in Hospital Tengku Ampuan Afzan (HTAA) Kuantan, Pahang which included all patients started on Cinacalcet between 1st October 2017 to 30th September 2018. Demographics data were recorded and the laboratory values of intact Parathyroid Hormone (iPTH), Calcium (Ca), Alkaline Phosphatase (ALP) and Phosphate (PO4) pre and 6 months post therapy were analysed.

RESULTS:

A total of 13 patients were included in this study. Baseline mean iPTH value was 1020 ± 412.22 pg/ml prior to the initiation of Cinacalcet. The mean baseline for Ca, PO4 and ALP levels were 2.35 ± 0.19 mmol/L, 2.21 ± 0.28 mmol/L and 181.46 ± 101.62 U/L respectively. After 6 months of therapy, mean iPTH value reduced by 6.9% (mean: 949.52 ± 454.46 pg/ml, $p=0.467$). There was a reduction in mean calcium level by 5.1% (mean: 2.19 ± 0.41 mmol/L, $p=0.187$). One patient (8%) developed significant

hypocalcaemia (ca: 1.75 mmol/L) after treatment. There was no reduction of ALP level (mean: 285.62 ± 255.91 U/L) and no increase in PO4 level (mean: 2.24 ± 0.66 mmol/L).

CONCLUSIONS:

Our study did not demonstrate a significant reduction of iPTH or any changes in CKD-MBD biochemical markers by use of Cinacalcet. This is most likely due to small sample size and short duration of follow-up. Future studies should look at clinical evaluation and long term follow-up.

Session: Poster

Topic: MSN - Mineral Bone Disease

Abstract ID: 179

PREDICTORS, TREATMENT AND OUTCOMES OF COAGULASE-NEGATIVE STAPHYLOCOCCAL PERITONITIS IN MALAYSIAN PERITONEAL DIALYSIS PATIENTS

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INTRODUCTION AND AIMS:

Coagulase-negative Staphylococci (CoNS) are frequently isolated in peritoneal dialysis (PD)-related peritonitis with high rate of relapse and repeat peritonitis. Oxacillin-resistance among CoNS species were high in previous studies and was associated with poor outcomes. The optimal treatment regimen for CoNS peritonitis remains debatable. Hence, this study aimed to describe the clinical and microbiologic characteristics of CoNS peritonitis in a large PD center and to determine factors influencing the outcomes.

METHODS:

All cases of CoNS peritonitis in Selayang Hospital between 2011 and 2017 were reviewed retrospectively.

RESULTS:

A total of 677 episodes of peritonitis were recorded; 126 episodes (19%) in 88 patients were caused by CoNS. The oxacillin and gentamicin resistance rate were 46% and 45%, respectively. The overall primary response rate was 89% and the complete cure rate was 76%. Patients who had concomitant exit site infection (odds ratio [OR] 14.35, 95% confidence interval [CI] 2.10 to 97.83, $P < 0.01$) or recent systemic antibiotic exposure (OR 22.22, 95% CI 1.20 to 412.70, $P = 0.04$) had a higher risk of not achieving primary response. CoNS episodes that were treated with beta-lactam-based or vancomycin-based therapy had a similar primary response rate and complete cure rate. The rate of relapse and repeat were 13% and 17%, respectively. Relapsed (OR 4.39, 95% CI 1.11 to 17.31, $P = 0.04$) and repeat episodes (OR 3.37, 95% CI 1.21 to 9.36, $P = 0.02$)

had a significantly higher non-resolution rate than the first episodes. Patients with recent systemic antibiotic exposure had a higher risk of Tenckhoff catheter removal compared to those without (OR 5.96, 95% CI 1.38 to 25.74, $P = 0.02$).

CONCLUSIONS: Relapsed and repeat CoNS peritonitis were common and were associated with worse outcomes. Oxacillin resistance was common, but the treatment outcome remained favorable when beta-lactam-based regimen was used as empirical therapy.

Session: Oral

Topic: MSN - Peritoneal Dialysis

Abstract ID: 180

ENCOUNTERS AND OUTCOME OF CATHETER RELATED BLOOD STREAM INFECTION (CRBSI) IN HOSPITAL TENGKU AMPUAN RAHIMAH (HTAR) AMONG HEMODIALYSIS PATIENT FROM PRIVATE DIALYSIS CENTERS

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INTRODUCTION AND AIMS:

Catheter-related bloodstream infection (CRBSI) is defined as the presence of bacteraemia originating from an intravenous catheter. It is a common cause of hospitalization and mortality in patients who have end stage renal dialysis on haemodialysis.

METHODS:

An observational study was conducted in Hospital Tengku Ampuan Rahimah (HTAR) from May 2018 until April 2019 to assess the outcome of patients who were admitted for CRBSI (suspected and confirmed). All admissions for suspected and treated CRBSI were recorded. Patient socio-demographic data, presence of Diabetes Mellitus, catheter types and outcome, organism from central and peripheral, types of catheter as well as ICU stay and metastatic manifestations were recorded. Data from 1st of May 2018 until 30th April 2019 was collected and analysed using SPSS.

RESULTS:

During the study period, there were a total of 113 cases of CRBSI seen in HTAR. The mean age was 54.9 years and 57.5% were male. Majority of the patients has diabetes (72.2%). Most of the catheters are jugular non-cuffed catheter (85.8%). The remainders were jugular cuffed catheter and femoral non cuffed catheter. Most of the catheters were changed (59.3%) or removed (32.7%) and the remaining were salvaged. 8% of the patients were admitted to ICU. Complications developed were

endocarditis (2.7%) and metastatic abscesses (7.1%). Most of the patients survived CRBSI (77.9%). The remaining patients were either discharged to palliative care (8%) or passed away (14.2%).

CONCLUSIONS:

There are still high number complications and mortality arises from CRBSIs. More efforts are needed to reduce such condition in order to prevent such disastrous condition.

Session: Poster

Topic: MSN - Hemodialysis

Abstract ID: 181

DOES PRESENCE OF IN-HOUSE NEPHROLOGIST MAKE A DIFFERENCE IN FIRST CHOICE OF DIALYSIS MODALITY FOR RENAL REPLACEMENT THERAPY?

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INTRODUCTION AND AIMS:

In our centre, Dialysis Preparatory Clinic (DPC) is scheduled weekly for counseling of renal replacement therapy (RRT). This structured clinic includes 4 sessions; i. standard lecture given by allied health professionals ii. video on peritoneal dialysis iii. counseling by pharmacists iv. review by doctor for decision.

METHODS:

This retrospective, cross-sectional study compared all patients who attended DPC between 1st October 2015 to 1st of February 2016 (presence of in-house nephrologist, duration A) and 1st of January to 31st of December 2018 (no in-house nephrologist, duration B). Patients who attended were recently started dialysis or Chronic Kidney Disease (CKD) Stage V from Nephrology clinic. Demographic and clinical data were collected from the electronic medical record system and analysed using SPSS version 25.0 software.

RESULTS:

For duration A: 130 patients were included. Forty-five percent (n=59) were male, aged 55.71 ± 10.87 years and 55% (n=71) were female, aged 56.46 ± 13.07 years (p=0.725). Following one session, 114 (87.7%) patients have made decisions on choice of first RRT - 44.7% (n=51) chose Peritoneal Dialysis (PD), 35.9% (n=41) chose Haemodialysis, 15.8% (n=20) decided for conservative care and 1.8% (n=2) hoped for transplant. Sixteen (12.3%) remained undecided.

For duration B: Of 143 patients, 76 were male aged 57.9 ± 12.2 years and 67 were female aged 60.0 ± 14.1 years. PD was chosen by 68.9% (n=73), 25.5% (n=27) preferred

Haemodialysis and 5.7% (n=6) opted for conservative care. Thirty-seven patients (25.9%) remained undecided. Using Chi-Squared test, more patients chose PD (p<0.001) and were undecided (p<0.05) in duration B.

CONCLUSIONS:

Our study shows that the number of patients choosing PD as their first option was higher when there was no in-house nephrologist. The percentage of patients who were undecided was also also higher. These findings certainly raise concerns. More detailed research with prospective longitudinal design is needed to verify these findings.

Session: Oral

Topic: MSN - Others

Abstract ID: 186

DEMOGRAPHICS OF PATIENTS ATTENDING PRE-RENAL REPLACEMENT THERAPY COUNSELLING (PRE-RRTC) IN KAJANG HOSPITAL

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INTRODUCTION AND AIMS:

Nephrologist-led dialysis center is relatively new in Kajang Hospital. With influx of new end stage renal disease (ESRD) patients, the task to emphasize on Renal replacement therapy (RRT) option is mandatory especially in giving the optimal time for patient to prepare and adapt with new changes. Therefore, Pre-RRTC was set up in 2018 targeting stage 4 chronic kidney disease (CKD) patients.

METHODS:

We did a retrospective study of all patients referred to pre-RRTC in 2018. Inclusion criteria were patients attending > 3 months pre-dialysis nephrology follow-up and at least one pre-RRTC session. Demographics of the patients was studied. We described the mean creatinine level during first encounter at pre-RRTC and RRT methods of choice. We also calculate the mean duration of starting RRT from the pre-RRTC.

RESULTS:

Thirty-six patients were recruited with mean age of 54 ± 14 years old, whereby 30.6% of them were in geriatric age group. Fifty three percent patients were female. There were 75% Malay patients, 19% Chinese and 5% Indians. Mean creatinine at pre-RRTC was $463 \pm 150 \mu\text{mol/L}$. Most patients preferred CAPD (41%), compared to HD (27.8%). There were 8.3% of the patients wish to be treated conservatively, while 22.2% still undecided on RRT mode. There were 27% patients have started RRT with mean duration of starting RRT since the first pre-RRTC was 5.2 ± 3.9 months but there were no significant difference in the duration of starting RRT in both CAPD and HD group, $p=0.167$

CONCLUSIONS:

Most patients seen in our pre-RRTC were stage 5 CKD thus a very short time frame from preparation of patients to the start of RRT. Optimal time to prepare patients was suggested to be at least 6 months before requiring RRT. Further effort and a more structured approach are needed to ensure the efficacy of pre-RRTC session.

Session: Poster

Topic: MSN - Hemodialysis

Abstract ID: 189

NEPHROLOGIST INITIATED PERITONEAL DIALYSIS CATHETER INSERTION IN PATIENTS WITH EXTENDED CRITERIA

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INTRODUCTION AND AIMS:

Peritoneal dialysis (PD) catheter insertion using peritoneoscopic technique by nephrologist has been implemented since 2017 in our centre. Previously patients who were unsuitable for PD catheter insertion via surgical open technique under local anaesthesia will be referred for laparoscopic surgery under general anaesthesia. Now we attempt PD catheter insertion via peritoneoscopic technique under local anaesthesia for these patients.

METHODS:

All patients with PD catheter insertion from 2017 to 2018 were reviewed. Extended criteria were defined as patients with body mass index (BMI) ≥ 30 and/or previous abdominal scars. Comparisons between patients with normal and extended criteria via peritoneoscopic technique insertion were studied followed by peritoneoscopic versus laparoscopic technique in extended criteria cohort looking at exit site complication and catheter functioning at 1 month. Statistical analysis was done via SPSS version 22.

RESULTS:

A total 142 patients were reviewed in which 108 patients had peritoneoscopic catheter insertion while 34 patients had laparoscopic catheter insertion. Out of 108 patients, 40 patients fulfilled extended criteria while 68 patients were normal criteria. The mean age between extended and normal criteria was 51.7 ± 9.9 years versus 53.3 ± 11.9 years, $p=0.45$. The mean BMI was 32.8 ± 1.3 kg versus $24.5 \pm$ kg, $p < 0.05$. There was no significant difference between pericatheter leaking (5% versus 13.2%, $p=0.17$), pericatheter bleeding (7.5% versus 7.4%, $p=0.98$), exit site infection (ESI) (12.5% versus 5.9%, $p=0.23$). For both criteria, catheter functioning at 1 month was 82.5% versus 86.8%, $p=0.55$. Comparison outcome between extended

criteria under peritoneoscopic versus laparoscopic technique showed no differences observed in pericatheter bleeding (7.5% versus 0, $p=0.11$), ESI (12.5% versus 29%, $p=0.08$), catheter function (82.5% versus 73.5%, $p=0.35$). With laparoscopic technique, there was higher pericatheter leak (40.6%) versus 5% with peritoneoscopic technique, $p \leq 0.05$.

CONCLUSIONS:

Nephrologist initiated peritoneoscopic catheter insertion in patients with extended criteria is recommended to reduce waiting time for general anaesthesia surgery.

Session: Poster

Topic: MSN - Peritoneal Dialysis

Abstract ID: 190

SHOULD THERE BE A FIFTH PREFERENCE OF OPTION FOR END-STAGE RENAL DISEASE IN MALAYSIA?

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INTRODUCTION AND AIMS:

Introduction: In preparation for dialysis, the options for End Stage Renal Disease (ESRD) patients include transplantation, haemodialysis, peritoneal dialysis and conservative care. Patients and families are given education and counseling in a structured program on the first visit of Dialysis Preparatory Clinic (DPC). Treatment needs to start in a timely fashion as delaying commencement of dialysis confers higher morbidity and mortality.

Objective: To explore decision of clinical management option for ESRD patients made during their first DPC visit

METHODS:

This is a retrospective study, which included all patients that attended DPC between 1st of January to 31st of December 2018. Demographic and clinical data were collected from the electronic medical record system and analyzed using SPSS version 25.0 software.

RESULTS:

A total of 143 patients attended DPC in the duration of study; 76 were male aged 57.9 ± 12.2 years and 67 were female aged 60.0 ± 14.1 years. Majority had co-morbidities of Diabetes Mellitus (72%) and Hypertension (93%). Estimated glomerular filtration rate (eGFR) using CKD-EPI formula was 6.72 ± 7 ml/min/1.73m². Forty-five patients (31.5%) had started dialysis before or the same day of DPC appointment. Fifty one percent (n=73) chose peritoneal dialysis, 18.9% (n=27) preferred Hemodialysis and 4.2% (n=6) opted for conservative care.

Thirty-seven patients (25.9%) remained undecided.

Patients who could not decide on option were significantly older 61.49 ± 10.13 years when compared to patients who had made a decision (55.41 ± 13.65 years, $p=0.014$). There was no difference in eGFR ($p=0.547$) between the two groups.

CONCLUSIONS:

One quarter of patients were still undecided on the choice of treatment despite counseling in DPC. Hence, this could be considered as a fifth preference of option for ESRD in Malaysia. To improve nephrology care, research needs to be performed to understand the reasons why they are unable to make decisions and these issues should be addressed accordingly.

Session: Poster

Topic: MSN - Others

Abstract ID: 191

AN UNUSUAL CASE OF LATE-ONSET SPONTANEOUS RENAL ALLOGRAFT THROMBOSIS

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INTRODUCTION AND AIMS:

We report a case of late-onset spontaneous renal artery thrombosis which resulted in allograft loss.

METHODS:

Case report

RESULTS:

A 64-year-old female patient with past history of end-stage renal disease secondary to hypertensive nephropathy with subsequent cadaveric renal transplant in 2006, presented with 1-week history of cough and fever, with left iliac fossa pain over her renal allograft without history of trauma. She was on maintenance immunosuppression of Tacrolimus, Mycophenolate mofetil and prednisolone. Her renal allograft pain was progressively worsening with hematuria and acute allograft dysfunction with serum creatinine risen to 460 $\mu\text{mol/l}$ from baseline of 94 $\mu\text{mol/l}$ despite IV hydration and sepsis treatment. An urgent ultrasound doppler of transplanted kidney showed a wedged shape of echogenic area in upper pole suggestive of lobar nephronia, with high resistive index (1.0) and diastolic flow reversal. Subsequently, a CT angiogram and CT venogram showed stenosis at anastomosis of the main allograft renal artery and filling defect at middle segmental renal artery. Diagnosis of transplant renal artery stenosis and thrombosis was made. Patient was started on anticoagulation with warfarin and enoxaparin bridging. Unfortunately, the allograft function deteriorated and patient was subsequently started on hemodialysis for allograft failure.

Renal allograft thrombosis is an important but uncommon cause of allograft failure. It usually occurs in the early postoperative period but our patient had it 12 years after transplant. Reported risk factors including de novo or recurrent glomerulonephritis especially nephrotic

syndrome, thrombophilia or polycythemia were not present in our patient, with no vascular kinking seen on CT scan which made it an unusual case of spontaneous thrombosis. Treatment modalities include anticoagulation, thrombolysis or mechanical thrombectomy.

CONCLUSIONS:

Renal allograft thrombosis can be a devastating post transplant complication. High index of clinical suspicion with timely diagnostic workup and urgent treatment are crucial to prevent disease progression and allograft loss.

Session: Poster

Topic: MSN - Transplant

Abstract ID: 193

A STUDY OF COST DIFFERENCE IN REUSE DIALYZER VERSUS SINGLE USE IN TERTIARY HOSPITAL IN KLANG VALLEY

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¹ Hospital Selayang

INTRODUCTION AND AIMS:

SU dialyzer used for clinical benefits and human resource limitations. Economic considerations believed as the driving force for continued use of RU. Economic benefits of RU reported but with cheaper high flux dialyzer and increasing general cost, the benefits may disappear.

METHODS:

A calculation of RU for 6 times (6X) and 12 times (12X) to SU for one patient/month and one patient/RU or dialyzer respectively. In RU, the capital cost includes the reprocessing room and reprocessing machine. A fixed cost maintaining the reprocessing room and machine includes utility bills, personnel and chemical for sanitizer and calibration. The variable cost in RU includes utility bills, reprocessing chemical, personal protective equipment and solid waste management. The cost of dialyzer is based on tender price.

RESULTS:

Extra cost using either SU or RU for one patient/day calculated. In SU, cost per patient/dialyzer is RM28.00, where one dialyzer (RM22.00) and waste disposal (RM2.40/dialyzer). In RU, the costs are fixed cost RM55.31/day, variable cost RM4.57/day, reprocessing machine and maintenance/day RM11.10. The extra cost for one patient/month in SU RM226.00, RU for 6X and 12X are RM 1774.00 and RM 1749.60 respectively. In SU, cost per patient/dialyzer/day is static at RM28.00. The cost per patient/RU/day is affected by numbers of patients. The cost per patient/RU/day in for 100, 30, 8 and

4 patients/unit with 6X are RM10.10, RM13.30 , RM25.80 and RM43.00 and for 12X are RM6.26, RM11.30, RM24.00 and RM41.40 respectively.

CONCLUSIONS: RU demonstrated savings in cost difference per patient/RU /day comparing to SU with more patients. The difference appears closer when number of patients reach 8. Cost analysis of SU versus RU should include cost efficient in health benefits and green environment.

Session: Oral

Topic: MSN - Hemodialysis

Abstract ID: 198

MODE OF DIALYSIS AND OUTCOMES OF CKD V GERIATRIC PATIENTS : A SINGLE CENTER EXPERIENCE: 2 YEARS COHORT

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¹ Selayang GH

INTRODUCTION AND AIMS:

End Stage Renal Disease(ESRD) is becoming a geriatric condition with increased prevalence of diabetes, hypertension and improved life expectancy. Demand for renal replacement therapy (RRT) among elderly patients is increasing worldwide.

Objectives: To study the epidemiological data and outcome of CKD V geriatric patients

METHODS:

A retrospective cohort study was conducted on first presentation of CKD V geriatric patients (> 65 years) attending clinic from 1st January 2016 till 31st December 2016. Demographics, clinical outcome and laboratory data were obtained from the hospital electronic record. The Statistical analysis was done using SPSS version 23. Objectives: To study the epidemiological data and outcome of CKD V geriatric patients

RESULTS:

A total of 193 CKD V patients were identified. The elderly comprised of 47.1% (n=91), predominated by male, 47.3% (n=43) with a mean age of 71.3 ± 5.1 years. Comorbidities were predominated by hypertension, diabetes, dyslipidemia and ischemic heart disease. Mean eGFR at referral was 12.5 ± 4.9 mcml/L. Mean duration to initiate dialysis from first consultation was 8.5 ± 6.4 months and mean eGFR at initiation was 8.3 ± 3.6 mls/min/1.73m². The choice of RRT were palliative 49.5% (n = 45) followed by haemodialysis (HD) 73.9% (n = 34) and peritoneal dialysis (PD) 26% (n=12). 6 and 12 months survival rate post dialysis initiation were 56.5% (n=26) and 43.5% (n = 20) respectively. In those above 75 years old, survival rate at 6 months was only 33.3% (n = 6) post dialysis initiation.

CONCLUSIONS:

Geriatric patients represent a significant number and majority chose palliative care. Survival rate at 6 and 12 months remain low despite dialysis. Further studies required to identify the probable cause of low survival rate.

Session: Poster

Topic: MSN - Hemodialysis

Abstract ID: 199

PREVALENCE OF CARDIOVASCULAR DISEASES IN CKD IN A DISTRICT HOSPITAL.

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INTRODUCTION AND AIMS:

Cardiovascular diseases are the most common causes of death among hemodialysis patients. Therefore, the aim of this study is to evaluate the prevalence of cardiovascular risk factors in HD Hospital Kajang. Additionally, inflammatory makers (CRP) value is studied across other independent variables in our patients.

METHODS:

A cross-sectional study is done from August 2018 until April 2019. Cardiovascular disease is defined as the presence of echocardiographic dysfunction, ischaemic heart disease, dysrhythmias and cerebrovascular disease. Clinical notes, metabolic habitus, echocardiogram, admissions, biochemical parameters and medications were reviewed.

RESULTS:

All 54 patients were included (17F, 37M). Their average age was 52.3 ± 17.3 years old. Mean time on HD were 9.9 ± 6.1 years. Prevalence of cardiovascular diseases were 86% (n=46) of patients. The prevalence of cardiovascular risk factors observed were 75% for hypertension, 19% for dyslipidemia, and 43% for diabetes. 4 patients had cardiac related events. Total cholesterol, LDL and HDL were 3.94 ± 1.09 mmol/L, 2.11 ± 0.79 mmol/L, 1.13 ± 0.49 mmol/L respectively. Mean BMI is 23.7 ± 5.8 kg/m². Patients had LVEF of 60-72% while 30% diastolic dysfunction. Mean Haemoglobin 10.2 ± 2.22 g/dL and CRP 8 ± 9 mg/L. Patients' medications; 30% on single antiplatelet, 3.7% on double antiplatelet, 1.8% on Warfarin and 22% on statins.

Data was fitted using SAS 9.3 to calculate predicted CRP as dependent by crossing with independent variables using linear regression in which outcome were no statistically significant at 53 observations ($R^2 < 0.2$).

CONCLUSIONS: Cardiovascular diseases prevalence is high in patient receiving haemodialysis in Hospital Kajang. CRP remains highly variable in our HDU patients

Session: Poster

Topic: MSN - Hemodialysis

Abstract ID: 195

MODE OF RENAL REPLACEMENT THERAPY AND OUTCOMES OF CKD V PATIENTS: AN EPIDEMIOLOGICAL STUDY

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INTRODUCTION AND AIMS:

The prevalence of End stage Kidney disease has increased progressively over the past decade. Preparation of Renal Replacement Therapy (RRT) is recommended in patients with CKD stage V with an eGFR of < 15mls/min. An integrated care is needed to provide supportive or palliative care to maintain quality of life.

Objectives: To study the epidemiological data and outcome of CKD V patients

METHODS:

A retrospective cohort study was conducted on first presentation of CKD V patients attending clinic from 1st January 2016 till 31st December 2016. Demographics, clinical outcome and laboratory data were obtained from the hospital electronic medical record. The Statistical analysis was done using SPSS version 23.

RESULTS:

193 new patients were identified in Predialysis Clinic from 1st Jan 2016 to 31st December 2016. The mean age of this cohort was 63 ± 11 years and predominated by males with 51.3% (n=99). Mean eGFR at referral was 12.5 ± 4.8 ml/min/1.73m². Comorbidities were predominated by Hypertension, followed by Diabetes, Dyslipidimia and Ischemic Heart Disease. 66.9% (n =129) initiated dialysis at 7.2 ± 6 months post first encounter in with a Mean eGFR of 7.4 ± 3.3 ml/min/1.73m². 41.5% (n=80) initiated dialysis using temporary haemodialysis catheter, 10.4% (n=20) using fistula followed by tenckhoff catheter in 13.5% (n=26). 12.4% opted for palliative treatment. At 6 and 12 months post initiation of dialysis 60.2% (n=80) and 50.38% (n = 65) were alive respectively.

CONCLUSIONS:

Majority of CKD V attending pre-dialysis clinic opted for RRT (90%) but initiated using temporary HD catheter despite seeing a nephrology team more than 6 months. 6 and 12 months survival rate in this cohort is low.

Session: Poster

Topic: MSN - Hemodialysis

Abstract ID: 200