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Theme: Abstract Presentation: Chronic Kidney Disease

OR/ABS/NAN/2017/C001

APOL1 GENETIC VARIANTS CONTRIBUTE TO ATHEROSCLEROTIC CARDIOVASCULAR DISEASE RISK IN BLACK SOUTH AFRICANS

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Background: Apolipoprotein L1 (APOL1), a major component of high-density lipoprotein, plays a major role in cholesterol metabolism and attenuation of low-density lipoprotein oxidation. While protecting against *Trypanosoma brucei* infection, APOL1 risk alleles increase risk for chronic kidney disease (CKD) and cardiovascular disease (CVD) among patients of African descent.

Aims and Objectives: We investigated whether APOL1 genetic variants significantly increase susceptibility and severity of atherosclerotic CVD in black South Africans.

Methods: DNA samples of 160 participants (120 CKD patients and 40 controls) were genotyped for APOL1 G1 and G2 variants. Serum oxidized LDL, carotid Doppler ultrasonography and echocardiography were performed.

Results: Previously reported association between APOL1 polymorphisms and CKD was confirmed (OR, 4.29; CI: 1.24-4.92, p=0.022). Carriers of any combination of 2 APOL1 risk alleles had a 3-fold increased risk of atherosclerosis (OR, 3.67; CI: 1.43-9.38, p=0.007) and a 2-fold higher risk of developing left ventricular hypertrophy (OR, 2.92; CI: 1.02-8.35, p=0.007) compared with individuals with no risk allele.

Conclusion: The findings suggest an increased burden of atherosclerotic CVD among Black South African carriers of APOL1 gene polymorphisms. Further studies are needed to evaluate the influence of APOL1 risk variants on atherosclerotic CVD in other regions of sub-Saharan Africa.

OR/ABS/NAN/2017/C002

EVALUATION OF INFLAMMATION AND ENDOTHELIAL DYSFUNCTION BIOMARKERS IN CHRONIC KIDNEY DISEASE (CKD) PATIENTS IN SOKOTO

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Introduction: Inflammation and endothelial dysfunction have been known to be involved in the pathogenesis of cardiovascular diseases. As such, examining the levels of inflammation and endothelial dysfunction is very critical to the prevention of cardiovascular diseases among CKD patients. This study aims to investigate the progression of inflammation and endothelial dysfunction among CKD patients in Sokoto.

Methods: A total of 67 CKD patients were divided into 5 groups based on the stages of their kidney disease calculated using the MDRD 4-variable equation for estimated glomerular filtration rate (eGFR). The presence of inflammation was determined by C-Reactive Protein (CRP) and Tumor Necrosis Factor alpha (TNF – α), while endothelial dysfunction was determined by the levels of Asymmetric dimethylarginine (ADMA) using ELISA kits.

Results: The mean eGFR of the patients was 49.97 ± 4.69 ml/min/1.73m². There were significant increase ($p < 0.05$) in CRP, TNF- α and ADMA of the CKD patients across the stages as compared to the non-CKD subjects. It was observed that as the CRP, TNF- α and ADMA increase, the eGFR significantly ($p < 0.05$) decreases. Both CRP and TNF- α indicated a significantly positive correlation ($p < 0.05$) with ADMA.

Conclusion: The results indicated progressive increase in inflammation and endothelial dysfunction as CKD deteriorates. In addition, increased levels of inflammation could directly affect endothelial dysfunction, thereby aggravating cardiovascular morbidity and mortality among CKD patients in Sokoto.

Keyword: Inflammation, Endothelial dysfunction, Cardiovascular disease, Chronic kidney disease, Glomerular filtration rate.

OR/ABS/NAN/2017/C003

THE INFLUENCE OF INFLAMMATORY GENETIC MARKERS AND INFLAMMATORY CYTOKINE LEVELS ON ATHEROSCLEROSIS RISK IN SOUTH AFRICAN CHRONIC KIDNEY DISEASE PATIENTS

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Background: Inflammation plays a key role in the development of atherosclerosis. Genetic variations in inflammatory cytokines have been linked to the susceptibility and severity of atherosclerosis.

Aims and Objectives: We tested whether genotypic variations in inflammatory cytokine genes are a cause of systemic inflammatory state and atherosclerosis.

Methods: A cohort of 120 CKD patients and 40 controls were studied. Serum IL-6 and TGF- β levels were measured. Polymorphisms in the IL-6 and TGF- β genes were genotyped using PCR-SSP methods. Carotid atherosclerosis was assessed by B-mode ultrasonography.

Results: In CKD patients, serum IL-6 levels were associated with atherosclerosis (Odds ratio: 2.11). Serum TGF- β levels were reduced in patients with atherosclerosis, and had an inverse relationship with CIMT. Associations were identified between IL-6 gene polymorphisms and atherosclerosis (for G/G vs CC: Odds ratio=1.21; for GG+GC vs CC: Odds ratio=1.14). Patients with GG+GC genotypes had significantly higher levels of IL-6 than those with CC genotype. However, no association was found between the TGF- β gene polymorphisms and atherosclerosis.

Conclusion: Interleukin-6 gene polymorphism is associated with atherosclerosis in South African CKD patients, and the GG+GC genotypes contribute to increased serum levels of IL-6. Low serum TGF- β levels are a risk factor for atherosclerosis in CKD patients.

OR/ABS/NAN/2017/C004

THE BURDEN OF MALNUTRITION IN PREDIALYTIC CKD PATIENTS IN ILE-IFE

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Background: Malnutrition is a common problem in chronic kidney disease patients (CKD). It contributes to adverse outcomes in terms of mortality and morbidity. We set out to determine the frequency and pattern of malnutrition in our pre-dialytic CKD patients.

Methods: Adult patients with CKD attending the out-patient clinics were recruited consecutively alongside age and sex matched controls during the period of the study. The proportion of patients with malnutrition was determined using the international society of renal nutrition and metabolism (ISRNM) proposed criteria for malnutrition in patients with kidney disease and analysis was done using SPSS version 16.

Results: One hundred and two patients were recruited with a mean age of 47 \pm 11 years and a male to female ratio of 1.2:1. The aetiology of CKD in the patients were chronic glomerulonephritis 39.2%, hypertension 35.4%, Diabetes Mellitus 16.6%, and other cases accounted for the remaining 8.8%. The mean GFR for the patients was 38.05mls/min/1.73m² SD20.56, P<0.001. The patients were distributed thus; stage 2, 15.7%; stage 3, 14.7%; stage 4, 30.4%; stage 5, 11.8%. Malnutrition was present in 31.4% of the patients using the ISRNM criteria. The prevalence of malnutrition increased with advancing stages of CKD and increasing age.

Conclusion: Malnutrition is common in pre-dialytic CKD patients in our environment and worsens with further deterioration in renal function.

OR/ABS/NAN/2017/C005

**THE PREVALENCE OF AND RISK FACTORS FOR CKD IN AIYEPE COMMUNITY,
OGUN STATE**

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Background: Chronic kidney disease (CKD) has now assumed epidemic proportion worldwide especially in developing countries. In Nigeria and indeed most sub-Sahara Africa, there is paucity of such hard data because of lack of renal registry.

Aims: The aim of this study was to determine the prevalence of and risk factors for CKD in Aiyepe community.

Methods: It was a prospective community-based study involving 456 participants recruited through cluster and simple random sampling techniques. Socio-demographic, clinical and laboratory data were obtained and the GFR and proteinuria were repeated 3 months after the initial assessment. Data was analysed using SPSS version 16.

Results: Only four hundred and fifty six (97.4%) completed the study. Male:Female ratio was 1:1.8 and the age range was 18-80 years. Hypertension was seen in 28.9% while only 4.2% were diabetic. On logistic regression, age (OR-1.080, CI-95%, 1.059-1.102), female gender (OR-0.550, CI-95%, 0.320-0.945), BMI (OR-0.832, CI-95%, 0.785-0.882) and dyslipidaemia (OR-1.007, CI-95%, 0.978-1.037) were found to be predictive of CKD in this study.

Conclusion: The prevalence of CKD and its associated risk factors was high in Aiyepe community. Age, female gender, BMI, dyslipidaemia and poor knowledge were found to be risk factors for CKD in the community.

OR/ABS/NAN/2017/C006

**ASSESSMENT OF PERIPHERAL ARTERY DISEASE AND ITS CORELATES IN PATIENTS
WITH CKD**

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Background: Peripheral arterial disease (PAD) is an atherosclerotic syndrome that is associated with high risk of cardiovascular and cerebral events like myocardial infarction, stroke and death. The aim of this study is to determine the prevalence, pattern and relationship between peripheral arterial disease and its correlates in patients with chronic kidney disease.

Methods: Adult Patients ≥ 18 years with established chronic kidney disease defined by proteinuria for ≥ 3 months and or a GFR ≤ 60 ml/min/1.7m² were recruited and assessed for PAD using ankle brachial index. The relationship between PAD and left ventricular hypertrophy, hypertension, dyslipidaemia, atherogenic index of plasma, diabetes, serum albumin, urinary albumin/creatinine ratio and socio-demographic parameters was assessed in these patients.

Results: 60 patients (30 pre-dialysis and 30 dialysis) with stages 3-5 CKD and 60 control subjects who are non-PAD, non-hypertensive and non-diabetics were included in the study. There were 11(19%) participants

with PAD, 4(13.3%) pre-dialysis and 7(23.3%) dialysis. On bivariate analysis, PAD showed significant correlation with LVH (p-0.001), dyslipidemia (p-0.018), BMI (p-0.007), waist circumference (p-0.002) and symptoms of claudication (p-0.002). On multivariate logistic regression, only LVMI, Dyslipidemia and BMI were significant.

Conclusion: there was strong association of PAD with stages 3-5 CKD, there is also strong association of PAD with dyslipidemia, BMI and LVH.

OR/ABS/NAN/2017/C007

HEALTH RELATED QUALITY OF LIFE AND IT'S CORRELATES IN CHRONIC KIDNEY DISEASE PATIENTS AT AMINU KANO TEACHING HOSPITAL, KANO

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Background: Health Related Quality of Life (HRQOL) is a measure of treatment outcome in addition to traditional morbidity and mortality rates among CKD patients. Worse HRQOL outcomes for dialysis patients compared with those in earlier stages of CKD have been reported. Both set of patients also fare poorly when compared with transplanted and healthy individuals. Factors associated HRQOL were not adequately studied in this part of Nigeria.

Objective: To assess the HRQOL of CKD patients using the Kidney Disease quality of Life questionnaire (KDQOL) and the Karnofsky Performance status scale (KPS) and factors associated with it.

Methodology: This was a cross sectional study involving CKD patients attending the Nephrology clinic and those on maintenance haemodialysis as well as age and sex matched healthy volunteers at our Hospital. The KSP and the KDQOL instruments were used to assess the different domains of HRQOL. Socio-demographic, clinical and laboratory variables were also assessed.

Results: A total of 150 patients with CKD and 150 controls completed the study with 77 males and 73 females for both the CKD and control groups. The Mean±SD age of the CKD and control group was 52.83±14.21 and 52.43±14.50 years respectively. Subjects in the Control Group had higher physical health (PCS) and mental health (MCS) scores than individuals with CKD (P-value < 0.05). Subjects with CKD showed progressive decline in the scores of all HRQOL domains with reducing CKD stages (P-value <0.05). Serum Bicarbonate, total protein, albumin and urine protein-creatinine ratio correlated positively with all the five HRQOL domains. Serum Urea and Creatinine had a negative correlation with all five HRQOL domains. Male gender, comorbidities like diabetes and hypertension, history of Myocardial Infarction, heart failure and recent hospitalization were associated with HRQOL domains. The KSP and the KDQOL instrument showed good correlation in assessing HRQOL

Conclusion: The results showed that CKD patients have worse HRQOL scores when compared to healthy population. This study also found a positive correlation between generic instrument and disease specific instrument in assessing HRQOL of CKD patients.

OR/ABS/NAN/2017/C008

PREVALENCE OF HYPOALBUMINAEMIA AMONG DIALYSIS NAIVE END STAGE KIDNEY DISEASE PATIENTS IN UNIVERSITY OF ILORIN TEACHING HOSPITAL

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Introduction: Hypoalbuminaemia is prevalent among patients undergoing chronic haemodialysis and this is reflective of adverse clinical outcomes including poor quality of life, increased hospitalization and mortality. The need for assessing albumin levels in patients with end stage kidney disease (ESKD) prior to commencement of dialysis is of importance in improving outcomes. The aim of this study was to determine the burden of hypoalbuminaemia among dialysis naive patients with ESKD.

Methods: This was a cross sectional study of all patients with ESKD referred for haemodialysis over a six month period. Forty eight patients and equal number of controls were recruited. Data obtained were; demographics, body mass index (BMI), aetiology of ESKD, presence of heart disease on electrocardiogram and blood chemistry including serum albumin . Statistical significance was taken at 0.05.

Results: The mean age of ESKD patients was 54.3± 19.1years which was comparable with that of control 51.6±11.6 (p=0.412). The male to female ratio was 0.9:1 and majority of the patients were traders. The median BMI and atherogenic index of plasma (AIP) of patients were 22.9 ±4.3 and 0.07±0.38 respectively. 94% of patients had left ventricular hypertrophy (LVH) on ECG. The prevalence of hypoalbuminaemia was 93.7%, higher than 35.4% found in the control (p<0.001). Serum albumin correlates negatively with AIP (r = - 0.56, p < 0.001) but positively with BMI (r = 0.37, p = 0.009).

Conclusion: This study showed a high prevalence of hypoalbuminaemia among dialysis naive patients with end stage kidney disease. Low BMI and high AIP levels were predictive of low serum albumin.

OR/ABS/NAN/2017/C009

PREVALENCE AND PATTERN OF LEFT VENTRICULAR HYPERTROPHY AND FUNCTION IN HYPERTENSIVE CHRONIC KIDNEY DISEASE PATIENTS AND HYPERTENSIVE PATIENTS WITHOUT CHRONIC KIDNEY DISEASE A COMPARATIVE STUDY

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Background: Systemic hypertension is a global health burden with attendant systemic complication, which manifest as hypertensive target organ damage (TOD). CKD patients have higher frequency of adverse cardiovascular outcomes than the general population. This study aims to determine the prevalence and pattern of left ventricular hypertrophy and function among hypertensive CKD patients and those without CKD.

Methodology: The study recruited a total of seven hundred and seventy eight patients which included three hundred hypertensive CKD subjects attending the nephrology clinic at LASUTH, two hundred and ninety seven hypertensive subjects attending the hypertension clinic and one hundred and eighty one healthy control subjects, who underwent investigation and echocardiographic.

Results: The prevalence of LVH among CKD subjects was 165(65%), and was significantly higher than hypertensive subjects 93(34.1%) and controls 7(4.2%) with $\chi^2 = 155.34$ and $P < 0.001$. The most common left ventricular geometric pattern was concentric hypertrophy 131(50.4%) among CKD subjects, and concentric remodelling 107(37.8%) among hypertensive subjects, while normal 124(73.8%) among controls ($P < 0.001$).

Conclusion: This study demonstrated high prevalence of LVH and poor left ventricular function among CKD patients compared to hypertensive subjects and healthy controls. Therefore attention should be towards early identification of declining cardiovascular function and therapy.

OR/ABS/NAN/2017/C010

**EFFECT OF PSYCHOTHERAPY ON DEPRESSION AND ANXIETY IN CKD PATIENTS
ATTENDING KIDNEY CARE CENTRE**

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Introduction: Depression and anxiety are common psychopathologies present in CKD patients. Most physicians do not evaluate and manage their patients for depression and anxiety despite the fact that they have negative effect on the quality of life (QoL) and overall outcome of CKD patients.

Aim: To assess the effect of Psychotherapy on depression and anxiety in CKD patients.

Method: This was a prospective study that involved fifty consecutive CKD patients who were diagnosed of depression using Beck Depression Index (BDI) questionnaire. Anxiety was assessed using State Trait Anxiety Inventory questionnaire. They underwent 6-8 intensive psychotherapy sessions conducted by Clinical Psychologists over 3-6 weeks. The mean depression and anxiety score before and after treatment were compared using T-test. $P < 0.05$ were considered as significant.

Results: The study subjects consisted of 23 females and 27 males with a mean age of 47.7 ± 14.6 years. The etiologies of CKD were chronic glomerulonephritis in 17(34%), diabetic nephropathy in 14(28%) and hypertensive nephropathy in 13 (26%). Majority (92%) of the CKD were in stage 5. Depression was mild in 4(8%), moderate in 22(44%) and severe in 24(48%) before treatment and all the patients had only minimal depressive symptoms post intervention. The mean BDI score decreased from 28.00 ± 7.51 to 4.76 ± 2.44 ($p < 0.001$) while the mean anxiety score decreased from 19.22 ± 1.43 to 9.37 ± 5.82 ($p < 0.001$) following intervention.

Conclusion: Psychotherapy is an effective treatment of depression and anxiety in CKD patients. This may be an effective treatment in improving their QoL. We strongly recommend that Clinical Psychologists should be part of renal team in all renal hospitals/unit in Nigeria.

OR/ABS/NAN/2017/C011

**ACUTE DECOMPENSATION IN CHRONIC KIDNEY DISEASE: A RETROSPECTIVE
ANALYSIS OF 164 CASES**

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Background: Acute presentation is common in patients with pre-existing chronic kidney disease (CKD) and contribute to morbidity and mortality. We set out to identify the precipitants of acute decompensation in CKD in a bid to propose preventive strategies.

Methodology: A retrospective analysis of hospital data of 164 patients presenting with acute decompensation of CKD at Obafemi Awolowo University Teaching Hospital Complex was performed. Data was analysed using SPSS version 16.

Results: There were 164 patients. Males comprised (57.8%) of the participants. Highest incidence was in age-group 18-45 years with a slight female preponderance. CGN was found in 83 patients (50.6%), HTN in 21 patients (12.8%), Obstructive Uropathy in 19 patients (11.5%). Multiple aetiologies were seen in 2 patients and in 2 cause of CKD were not known. The commonest cause of acute decompensation of CKD was malignant phase hypertension seen in 25 patients (15.2%). UTI and nephrotoxins both accounted for 13.4%.

Conclusion: CGN was the commonest cause of CKD followed by HTN and Obstructive Uropathy. The three most common precipitants identified were malignant phase HTN UTI and nephrotoxins.

OR/ABS/NAN/2017/C014

PROGRESSION OF CHRONIC KIDNEY DISEASE (CKD) AFTER INITIAL ACUTE KIDNEY INJURY (AKI); EFFECT OF RACE

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Introduction: Various studies have shown an association between AKI and increased incidence of progression to ESRD. Other epidemiological studies show lower mortality in Black patients treated for ESRD compared to age, gender and comorbidity matched reference groups of Caucasian patients.

Aim: To assess for racial differences in the risk of CKD progression to ESRD after an episode of AKI in Black compared to Caucasian patients.

Methods: Retrospective cohort study of adults admitted to the University of Virginia Medical Center between January 1, 2001 and December 31, 2015 who developed AKI during hospitalization. Only the first hospitalization for AKI was considered in those with multiple hospitalizations. AKI definition of > 0.3 mg/dL rise in serum creatinine, SCr within 48 hours was used (Kidney Disease Improving Global Outcomes, KDIGO). The KDIGO classification of Chronic Kidney disease was used to classify patients with baseline CKD prior to presentation for acute kidney injury. Patients' characteristics or risk factors were summarized as frequencies and percentages for categorical variables and as mean \pm standard deviation for continuous variables.

Results: We had a total of 11, 837 patients in our cohort with 79.7% Caucasians and 17.8% Blacks. Mean age was 62.41 \pm 15.52 yr. Mean baseline SCr was 1.33 \pm 0.78 mg/dL with a mean Charlson index score of 4.13 \pm 3.21. A total of 1630 had CKD and 1046 progressed to ESRD. AKI recovery pattern for those patients with CKD will be analyzed to assess for similarities or differences in progression across racial groups.

Conclusion: We hypothesize that there is a decreased risk of CKD progression after the first episode of AKI in Black patients compared to Caucasian patients.

OR/ABS/NAN/2017/C015

SYSTEMATIC ANALYSIS OF COMMUNITY STUDIES OF RISK FACTORS AND PREVALENCE OF CKD IN NIGERIA (2006-2014)

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Background and Aim: Chronic kidney disease is a global health problem, responsible for a high magnitude of human suffering, huge economic loss and high mortality. The low and middle income countries (LMIC) such as Nigeria are equally and possibly more affected. The true prevalence rates of CKD is not known in Nigeria and some other LMIC countries due to absence of renal registries. Most of available data are single center based hospital data of renal admissions. For proper renal policy formulation, there is need for reliable data on the magnitude of the problem of CKD/ESRD in developing countries such as Nigeria. We conducted a systematic analysis of community based CKD screening reports conducted in all geographic regions of Nigeria between 2006 to 2014, to determine the aggregate prevalence of risk factors and prevalence of CKD in Nigeria.

Study design: A retrospective systematic analysis of reports of community based CKD screening in Nigeria.

Study methodology: Reports of community based CKD screening reports in all parts of Nigeria from 2006 to 2014 were manually and electronically searched. The aggregate percentage prevalence of CKD risk factors and percentage prevalence of CKD were determined.

Results: Thirty (30) reports of CKD screening exercises, within the study period were accessed and found suitable for subsequent analysis. The studies were 16(53.3%) in rural and 14(46.7%) in urban communities respectively, with a total of 17,107 subjects, age range 14-84years. The aggregate mean age of subjects in all the studies was 43.4 ±4.4 years and M:F ratio of 1:1.5. Geographic distribution of study sites were at least one from each of the six geo-political zones of the country. The aggregate percentage prevalence of risk factors of CKD were Obesity 27.5%; Proteinuria 20.3%; Hypertension 32.1% and diabetes mellitus 4.9%. The aggregate percentage prevalence of CKD (e-GFR <60mls/min/1.73m²) was 11.7%. Statistically significant difference was found in the prevalence of CKD between the rural and urban communities (16.4% vs 7.0%; p<0.001) but not in the risk factors.

Conclusions: The aggregate crude prevalence of CKD of 11.7% derived from a pool of 30 community based CKD screening reports across Nigeria is very likely to be closest to the true prevalence of CKD in Nigeria. We recommend government sponsored large scale multi-regional surveys of prevalence of CKD in Nigeria and the development of Renal Registry for renal health planning.

Key words: Chronic kidney disease burden, systematic analysis, community reports, Nigeria

OR/ABS/NAN/2017/C016

**CHRONIC KIDNEY DISEASE – MINERAL AND BONE DISORDER: A REVIEW OF 164
CKD PATIENTS**

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Introduction: Chronic kidney disease – mineral bone disorder (CKD – MBD) is a systemic disorder that includes abnormal mineral metabolism, abnormalities of bone morphology and extra-skeletal calcifications. It is recognized contribute to morbidity and mortality in patients with CKD. We set out to look at the manifestations and management pattern and in 164 managed CKD patients.

Aims and Objectives:

- To assess the parameters used in evaluating patients for CKD-MBD in OAUTHC, Ile-Ife.
- To determine the stage of kidney disease at which evaluation for CKD-MBD commences.
- To evaluate the modalities of management of CKD-MBD in OAUTHC.

Methodology: A retrospective analysis of 194 patients presenting with CKD at Obafemi Awolowo University Teaching Hospital Complex.

Results: Out of the 194 patients with CKD 54% were males and the commonest aetiology was CGN(50.6%). Only 32% of the patients studied had at least one documented marker of CKD – MBD. Only total calcium (31%) and inorganic phosphate (26%) were assessed and 70% of those assessed had evidence of CKD - MBD. All other markers like PTH levels, serum vit.D, FGF-23, and bone scans were not routinely done. An actual diagnosis of CKD – BMD was also not routinely made and only a handful of cases had treatment for CKD – MBD.

Conclusion: CKD – MBD is a common disorder in our CKD population and concerted efforts should be made to identify and quickly treat this disorder.

OR/ABS/NAN/2017/C017

**THE ROLE OF ENDOTOXIN-INDUCED IMMUNE ACTIVATION AND TOLL-LIKE
RECEPTOR 4 POLYMORPHISMS FOR SUSCEPTIBILITY AND SEVERITY OF
ATHEROSCLEROSIS IN BLACK SOUTH AFRICAN CHRONIC KIDNEY DISEASE
PATIENTS**

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Background:

Toll-like receptor-4 (TLR4) is a major receptor for lipopolysaccharide and other ligands involved in the pathogenesis of inflammation and atherosclerosis.

Aims and Objectives: We determined whether endotoxin levels and TLR4 polymorphisms are related to systemic inflammation and atherosclerosis among South African chronic kidney disease (CKD) patients.

Methods: Endotoxin levels and carotid intima media thickness (CIMT) measurements were compared between 120 CKD patients and 40 controls. We genotyped for the presence of TLR4 polymorphisms, and CIMT and inflammatory parameters were compared between patients with and without TLR4 polymorphisms.

Results: Atherosclerosis risk was associated with endotoxin levels (odds ratio: 2.34; 95% CI: 1.26-4.35, $p=0.007$). The risk of atherosclerosis was predicted by high concentrations inflammatory markers. The Asp299Gly allele was associated with a decreased risk of atherosclerosis independently of traditional atherosclerosis risk factors. The adjusted odds ratio associated with Asp299Gly allele was 0.10 (95% CI, 0.01 to 0.83; $P=0.034$). Compared with the carriers of the wild-type TLR4, patients with TLR4 polymorphisms had significantly lower levels of inflammatory cytokines and reduced CIMT values.

Conclusion: Atherogenic predictive power of endotoxin is significantly increased by the presence of high concentrations of immune mediators among South African CKD patients, with protection afforded by TLR4 Asp299Gly polymorphism.

Renal Replacement Therapy

OR/ABS/NAN/2017/R001

ASSESSMENT OF HEALTH RELATED QUALITY OF LIFE AND ITS DETERMINANTS IN PATIENTS WITH CKD

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Background: Health-related quality of life is an important, yet neglected aspect of CKD care. Very few studies in our environment have investigated HRQOL and its determinants in CKD subjects hence this study.

Methods: It was a Hospital based cross-sectional study conducted in the Renal Units of OAUTHC and National Hospital Abuja. Adult Patients ≥ 18 years with established CKD defined by proteinuria for ≥ 3 months and or a GFR ≤ 60 ml/min/1.7m² were recruited to determine the health related quality of life (HRQOL) using Kidney Disease Quality of Life-SFTM. We also sought to determine the relationship (if any) between HRQOL with various clinical, biochemical and socio-demographical parameters.

Results: 100 individuals were enrolled, which were made up of 50 CKD subjects (25 dialysis and 25 pre-dialysis) and 50 apparently normal volunteers who served as control, both were age and sex matched. The mean age of the subjects was 48.8 (± 12.2) years. There was significant decrease in KDCS, PCS and MCS scores in CKD patients compared with the controls. Subjects on dialysis and those with low level of education had low scores in KDCS, PCS, and MCS. Dialysis dependent patients with KT/V less than 1.2 also had low

scores compared to those who had higher values. However, age, sex, BMI, serum albumin, calcium and phosphate product were not found significantly influence HRQOL.

Conclusion: It was concluded that CKD, haemodialysis, low level of education and KT/V of dialysis negatively impact HRQOL while age, sex, BMI, serum albumin, calcium and phosphate product had no influence.

OR/ABS/NAN/2017/R002

STEAL SYNDROME COMPLICATING NATIVE ARTERIOVENOUS FISTULA -A CASE REPORT

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Introduction: Arteriovenous fistulae (AVF) are the preferred vascular access for chronic haemodialysis in end-stage renal disease. Complications arising from AVF include thrombosis, infection, high output cardiac failure and rarely vascular steal syndrome. We present a case of 29yr old lady with ESRD on chronic haemodialysis via a native AVF who presented with five days history of pain, parasthesia and progressive gangrene of the digits of the fistula hand.

Case Report: ME is a 29yr old lady with ESRD cause unknown, on twice weekly maintenance haemodialysis via a left native radiocephalic AVF for 30 months. She presented with five days history of pain, parasthesia and progressive darkening of the digits of the left hand. On examination she was in painful distress, pale, febrile, with hyper pigmented digits and early features of gangrene. Doppler ultrasound showed reduced flow distal to the fistula with no thrombosis or stenosis. Diagnosis of steal syndrome with early features of gangrene was made. She was managed with analgesics, antibiotics and the fistula was rested for six weeks. Temporary access was created using internal jugular vein for subsequent sessions of haemodialysis; she improved remarkably and was discharged after 2 weeks.

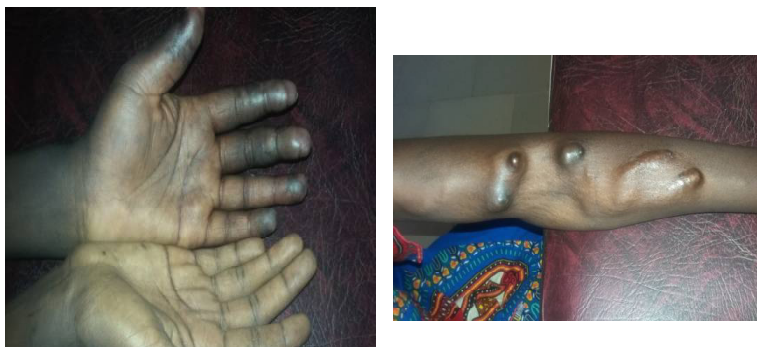


Fig.: 1 and 2 showing left hand features of early gangrene and the AVF

Conclusion: Steal syndrome although a rare complication of AVF does occur in our setting and prompt intervention can save both the AVF and the hand bearing it.

OR/ABS/NAN/2017/R007

IS THERE A GENDER DISPARITY IN SURVIVAL OF END-STAGE RENAL DISEASE PATIENTS ON HAEMODIALYSIS IN USMANUDANFODIYO UNIVERSITY TEACHING HOSPITAL, SOKOTO

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Introduction: The incidence of End-stage Renal Disease (ESRD) is rising globally. Both sexes are affected by the burden of Chronic kidney disease. Haemodialysis remains a viable option in the treatment of patients with ESRD until they are able to secure kidney transplant (where there is no contraindication). Mortality following commencement of Haemodialysis varies from region to region but is largely very high in Nigerian ESRD patients due largely to the inability of families to sustain the cost of haemodialysis. We set out to find out if there is any gender disparity in survival in our ESRD patients on Haemodialysis.

Methodology: This is a retrospective study. We reviewed the dialysis records of all patients enrolled into our haemodialysis programme from July 2007 to December 2016. Data obtained includes age, gender, Hepatitis status, vascular access at commencement of haemodialysis, duration on haemodialysis, number of dialysis sessions ever conducted and outcome of haemodialysis.

Results: A total of Seven hundred and seventy two (772) out of Eight hundred and seventy nine (879) patients were enrolled into the haemodialysis programme as a result of ESRD. Of these, 530 (68.7%) were males. The Mean age was 42 (IQR: 28-55) Years. Median Age for Males was 45 (IQR 30-60) Years versus 37 (25-50) years for Females (P<0.0001). A Total of 104 (13.5%) patients were HBV Positive and only 3 (0.4%) were HCV Positive. A Total of 733 (94.9%) patients were commenced on Haemodialysis using Femoral vascular Access. Overall Median duration on Haemodialysis was 13 (5-50) days. Median duration on Haemodialysis for Males was 12.5 (5-45) days and 14 (5-56) days for Females (P=0.28). Overall Median number of Dialysis sessions was 4 (1-7). Median number of dialysis sessions for Males was 4 (1-7) and 4 (1-8) for Females (P=0.36). Survival probability curve for both sexes was similar (Log rank= 1.09; P=0.29).

Conclusion: Our data showed that at the time of enrolment into our haemodialysis programme, Male patients were significantly older than women. However, there is no statistically significant gender difference in the pattern of vascular access use, duration on haemodialysis, number of dialysis sessions ever done and mortality.

OR/ABS/NAN/2017/R009

PATTERN, CLINICAL CHARACTERISTICS AND OUTCOME OF RENAL FAILURE IN ELDERLY PATIENTS SEEN IN A TERTIARY HOSPITAL IN UMUAHIA, SOUTHEAST NIGERIA; A PRELIMINARY REPORT

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Background: The proportion of elderly patients requiring renal replacement therapy is increasing worldwide. The clinical characteristics and outcomes of these elderly patients have not been described in Nigeria.

Objectives: To determine the clinical pattern and management outcomes of elderly patients with renal failure seen over a 3-year period.

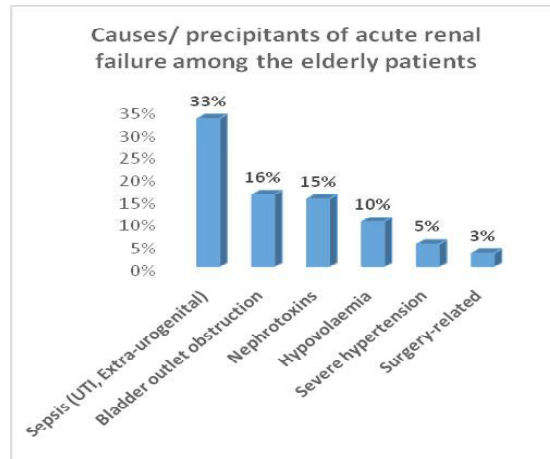
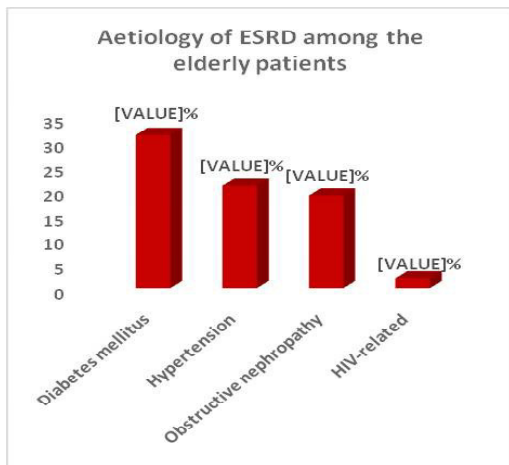
Materials and methods: A retrospective review of patients aged 60 years and above with acute or chronic renal failure managed at FMC Umuahia, Abia State. Data on clinical characteristics, management and survival were collated.

Results: Data was available for 105 patients with age range of 60-92 years and near equal gender distribution. At presentation, 81.9% had acute renal failure (ARF) while 18.1% had ESRD. Sepsis (33%) was the leading cause/precipitant of acute renal failure while diabetes (31.4%) was the cause of ESRD in majority. 63% of patients with ARF underwent haemodialysis with 48% discharged alive. One patient with ESRD underwent renal transplantation; among the others, 71% had haemodialysis while 29% were managed conservatively. Median duration of survival for all patients with ESRD was 6 weeks (0-28 months).

Conclusion: Sepsis and diabetes were the leading causes of acute renal failure and ESRD respectively. Survival was poor among the elderly patients with renal failure.

OR/ABS/NAN/2017/R010

ASSESSMENT OF VACCINATION STATUS OF HAEMO-DIALYSIS CHRONIC KIDNEY DISEASE POPULATION IN THREE TERTIARY HOSPITALS IN SOUTHERN NIGERIA



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Introduction: Despite risks of preventable blood-borne infections among our chronic kidney disease (CKD) population, not much work has been done to evaluate their knowledge of this subject and their vaccination status.

AIMS AND OBJECTIVES: To determine knowledge, awareness of blood-borne infections among CKD subjects and their immunization status.

Methods: CKD patients undergoing dialysis at Kidney Care Centre, Federal Medical Centre and LAUTECH in Ondo, Edo and Osun States respectively were studied. Data was analyzed using SPSS 19. Test of association by Chi-square was defined as significant at $p < 0.05$.

Results: One hundred and twenty four subjects (M:F=1.8:1) participated with mean age, 48.26 ± 14.45 years. Aetiology of CKD: chronic glomerulonephritis (36.3%), diabetic nephropathy (26.6%) and hypertensive nephrosclerosis (16.1%). Fifty percent, 15.3% and 16.9% had heard of HBV, pneumococcus and influenza virus. None knew the required number of vaccine doses for pneumococcus and influenza while only 10.5% knew that for HBV. Eleven (8.8%) had completed HBV vaccination; none had started vaccination against pneumococcus and influenza virus. There was an association between educational qualification and awareness of HBV, pneumococcus and influenza virus ($p < 0.05$).

Conclusion: There is need for committed efforts to educate and mobilize CKD patients on vaccination against blood-borne infections in our setting.

OR/ABS/NAN/2017/R011

EXPERIENCE AND CHALLENGES OF CARE OF POST KIDNEY TRANSPLANT PATIENTS IN A RESOURCE POOR NON-TRANSPLANT CENTER

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Background/Aim: In recent times a number of privileged end stage kidney disease (ESRD) patients from the sub-Saharan African (SSA) countries embark on off-shore kidney transplant to other continents, mostly India, other Asian and middle east countries. Non-transplant renal units in the region are increasingly faced with the long term care of such off-shore transplant patients with inherent challenges. We present our experience and challenges of providing care for such patients in our center at the University of Port Harcourt teaching hospital in Nigeria.

Methods: Retrospective analysis of the clinical data of all post-transplant patients during the period under consideration from 2000 to 2015.

Results: A total of twenty live-donor post-transplant patients with M/F ratio of 3:1 and a mean age of 42.6 ± 8.3 (26-57) years came under our clinical care post-transplant. Nineteen (25%) had their kidney transplant in India. Donor categorization were: biologically unrelated donors 11(55%), first degree relative -5(25%), second degree relative 2(10%) and spousal donors 2(10%). The commonest complication was graft dysfunction

in 9(45%). Others were NODAT 2(10%), Polycythaemia 2(10%), Sepsis, lower gastrointestinal haemorrhage and post-transplant TB in one patient (5%) each. Their survival statistics were 1-year survival (100%), 3-year survival (45%), 5-year survival (15%) and 10-year survival (5%). The longest survivor (alive) is 15 years post-transplant, whose donor was her identical twin sister. The commonest cause of death was graft failure. Major challenges of care include poor medication and clinic adherence, and lack of capacity for diagnosis of certain opportunistic infections. Others include poor access to calcineurin inhibitors drug level determination, local shortage of immunosuppressive agents, and limitations of histo-pathologic diagnosis of graft dysfunction or failure.

Conclusion: The overall outcome of the care of post-transplant patients in our centre is characterised by poor survival rates. There is need for capacity building of non-transplant Renal Units in resource poor jurisdictions, to provide more effective care for post-transplant patients and ensure better long term outcomes.

Keywords: Post transplant care- non-transplant center-challenges.

OR/ABS/NAN/2017/R012

AN AUDIT OF VASCULAR ACCESS USE FOR HAEMODIALYSIS IN OAUTHC, ILE-IFE

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Introduction: Effective vascular access for haemodialysis continues to be an important area of interest as it partly determines morbidity, mortality and directly influences survival. We set out to determine the vascular access routes used for haemodialysis in our patients and its effect on survival.

Methods: This retrospective study was carried out at the renal unit of OAUTH from October 2011 to September 2016 with data retrieved from the patients' case notes and dialysis charts. Analysis was done using SPSS version 16.

Results: A total of 177 patients had haemodialysis during the period and included 105(59.3%) males and 72(40.7%) females with a mean age of 42.3 years (range 17-85). The number of haemodialysis sessions per person was (median=4, Range = 1-866). Overall 84.2% of the study population used catheters inserted into the femoral veins at the onset of haemodialysis while 13.6%, 1.7% and 0.6% had non-tunnelled central venous catheter, arteriovenous fistula and tunnelled central venous catheter respectively. Only 4.5% had arteriovenous fistula created during the course of haemodialysis treatment. Recognised complications relating to vascular access include catheter site infections, failed cannulations, thrombosis, poor blood flow and non-functioning fistula. The overall mortality rate was 27.9%.

Conclusion: A large proportion of our patients are still initiated on first haemodialysis by way of femoral catheter with only 1.7% being initiated with arteriovenous fistula. This is a far cry from the standard recommendations and may be largely responsible for the high mortality rates.

OR/ABS/NAN/2017/M008

ROLE OF SPIRITUALITY DURING HAEMODIALYSIS: OAUTHC EXPERIENCE A PILOT STUDY

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Background: Spirituality reflects a broader interest in quality of life issues, especially in the case of patients with chronic kidney disease who needs palliative care. Recently the importance of assessing the quality of life of end stage renal disease (ESRD) patients, as they manage the complex demands of a chronic illness, has been emphasized.

Objective: the aim of the study is to determine the relationship between spirituality and quality of life in haemodialysis patients.

Methodology: the sample of this study consists of 7 participants. Data was collected with a 39 item questionnaire and analysed using descriptive statistics.

Results: the participants consist of 2 females and 5 males and all were married. 42.9% of the respondents were graduate and others secondary school leaver and their duration on dialysis was between one months and one year. 85.7% respondents were Christians and 14.3% Muslims, 42.9% receive financial support from their religious group and 14.3% claim they pray for him. Amongst the respondents 85.7% believe the illness can be cured by God while 71.4% believe the illness is spiritually induced and 51.1% say they pray to God during haemodialysis. 42.9% of the patients affirm they are unable to perform daily activities because of fatigue, despite this 85.7% of the respondents affirm that their self esteem and self worth is maintained. 85.7% claim they have good relationship with caregivers while 57.1% says they feel at ease during dialysis.

Conclusion: this study suggests a link between spirituality and quality of life in the aspect of psychological coping, however a larger multicenter study is needed to conclusively determine the relationship between spirituality and quality of life.

Keywords: Spirituality, haemodialysis quality of life

Acute Kidney Injury & Others

OR/ABS/NAN/2017/A001

PREGNANCY RELATED ACUTE KIDNEY INJURY, CLINICAL PROFILE AND OUTCOME OF MANAGEMENT: AN EXPERIENCE FROM 3 YEARS RETROSPECTIVE REVIEW IN A SPECIALIST HOSPITAL IN GUSAU, NORTH-WESTERN NIGERIA

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Introduction: Pregnancyrelatedacutekidneyinjury (PRAKI) is a clinicalsyndromecharacterisedby a rapid decline in glomerular filtration rate occurring during pregnancy orpuerperium. It is associated with high morbidity and mortality. We investigated the clinical presentation, management and outcome of PRAKI in our hospital.

Methods: A retrospective review of all women admitted into Ahmad Sani YarimanBakura Specialist Hospital with PRAKI from June 2013 to May 2016 was conducted with emphasis on clinical profile, management and outcome.

Results:Over the period of 3 years, 26 women with PRAKI were found with age ranging from 17 to 35 years, 12(46%) were from obstetrics haemorrhage; 4(15.4%) puerperal sepsis; 6(23.1%) preeclampsia/eclampsia; 2(7.7%) acute pyelonephritis and 2(7.7%) from hyperemesis gravidarum. Most of the cases 20(77%) occurred in third trimester and puerperium, 4(15.3%) in first trimester and 2(7.7%) in second trimester. The mean serum urea and creatinine at presentation were 27.5mmol/L and 463umol/L respectively. Seven patients had dialysis (26.9%) out of which 4(15.4%) had complete recovery, 2 (7.6%) died and 1(3.8%) was dialysis dependent. The indications for dialysis were persistent oliguria/anuria in 3(43%), pulmonary oedema with severe metabolic acidosis in 2(28.5%) and uraemic encephalopathy in 2(28.5%). Number of sessions ranged from 3 to 6.The remaining 19 cases (73%) were managed conservatively with complete recovery in 13(68.4%) and mortality in 6(31.6%). The maternal mortality of 26.9% from PRAKI was observed.

Conclusion: PRAKI remains an important cause of maternal morbidity and mortality in our environment. There is need to improve our obstetric care to prevent this menace.

OR/ABS/NAN/2017/A002

KNOWLEDGE OF ACUTE KIDNEY INJURY AMONG NURSES IN TWO GOVERNMENT HOSPITALS IN ONDO CITY

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Background:Acute kidney injury (AKI) has become a global health problem and it is associated with increased morbidity, mortality and overall health expenditure. Adequate knowledge of AKI among health care providers is essential for early diagnosis and management in order to reduce associated burden.

Aim: To determine the knowledge of AKI among nurses in the two government hospitals in Ondo city, Southwest Nigeria.

Methodology:This was a cross-sectional descriptive study that was carried in the two government hospital in Ondo city using a self administered pretested questionnaire that assessed knowledge of AKI and associated factors. P-value of < 0.05 was taken as significant.

Results: A total of 156 respondents participated in the study. Majority were females and between ages 20 - 40 years. Ninety-nine (63.5%) had d" 10 years nursing experience. A total of 106 (67.5%) had received formal lectures on AKI in the past. Only 12 (7.7%) of the respondents had good knowledge of AKI, 98 (62.8%) had fair knowledge and the remaining 46 (29.5%) had poor knowledge of AKI. There was significant association between knowledge of AKI and having received previous AKI lectures (p=0.03), but no association with years of nursing experience (p= 0.37)

Conclusion: Knowledge of AKI is inadequate in majority of nurses in Ondo city. There was significant association between having received previous AKI lecture and knowledge. We therefore recommend regular in-service training for practicing nurses on AKI. Also, lectures on AKI should be incorporated into both undergraduate and postgraduate nursing curriculum.

OR/ABS/NAN/2017/A004

CHARACTERISTICS AND OUTCOMES OF PREGNANCY RELATED ACUTE KIDNEY INJURY IN ILORIN, NIGERIA

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Background: Morbidity and mortality in pregnancy related acute kidney injury (PRAKI) is reducing in developed nations, but is still responsible for 15-30 percent of AKI in developing countries. With improvement in our gynaecologic and obstetric care and upgrade of HD facilities in recent times, it is unclear if this has culminated into better outcome of PRAKI.

Aim and Objective: This study is aimed at determining the characteristics and outcomes of PRAKI in University of Ilorin Teaching Hospital (UI TH), Ilorin.

Methods: An audit of acute kidney injury that occurred in pregnancy and puerperium was carried out, using records of patients from January 2011 to October, 2016. Data analysis was done using the SPSS 11 software.

Results: A total of 51 PRAKI (29.7%) out of 172 AKI patients were reviewed. The age ranged from 21 to 36 years with a mean of 25.03 ± 3.4 years. PRAKI occurred during post-partum period in 64.7% and 25.5% in 2nd trimester. Majority presented in stage 3 RIFLE criteria (43%) and features were hypertension, anaemia, oliguria and seizures. Pre-eclampsia/eclampsia, septic abortion and ante/ post-partum hemorrhage were common causes of PRAKI. Mortality rate was 23.5% with pregnancy toxemia responsible for 75% of deaths.

Conclusions: PRAKI is common in our setting, affecting young adults and occurring mostly in late 3rd trimester and puerperium. Main features were oliguria, seizures and hypertension with pregnancy toxemia responsible for the high mortality. Meticulous ante-natal care and better safe abortion is strongly advocated.

OR/ABS/NAN/2017/A006

FREQUENCY OF OCCURRENCE, RISK FACTORS AND PATTERN OF CONTRAST-INDUCED NEPHROPATHY IN ILE-IFE, NIGERIA

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Introduction: Increasing numbers of patients who may be at risk of contrast induced nephropathy (CIN) are being referred for procedures requiring the use of contrast medium (CM). We set out to determine the frequency of occurrence, risk factors and pattern of CIN in our environment.

Methodology: It was a descriptive observational study and 183 consecutive patients referred for contrast studies were recruited. The patients' demographic characteristics and relevant medical history was taken. All recruited patients were hydrated with 0.9% saline starting 1hr before contrast exposure and continued for 6hrs after contrast exposure. 20-100ml of 370mg iodine/ml of urografin 76% and 50- 100mls of 300mg/ml of iopamidol were used. Blood samples were taken for PCV, FBG & 2HPP and serial serum Creatinine estimation.

Results: 150 patients completed the study, age range was between 18 and 65 years with mean age of 46.0 years. Thirty-eight (25.3%) of the study population developed CIN. Association was seen between CIN and the following risk factors: Age >55 years (χ^2 -7.778, df – 1, p value- 0.005), PVC <30% (χ^2 -16.419, df – 1, p value - <0.001), hypertension (χ^2 - 11.054, df – 1, p value- 0.001) , diabetes(χ^2 - 5.312, df -1, p value- 0.021) , e-GFR <60ml/min (χ^2 -7.334, df- 1, p value- 0.007) Baseline serum creatinine >132.6ml/min (χ^2 - 13.418, df- 1, p value- 0.007), volume of contrast > 50ml, concentration of iodine >22,000g. PCV < 30% and e-GFR <60ml/min predicted CIN on multiple logistic regression. e-GFR<60ml/min (wald- 4.098 , df-1, OR- 3.648, p- value- 0.043) and PCV <30% (wald-8.322, df-1, OR- 6.407, p-value- 0.004). The likelihood of CIN increases with increasing number of risk factors.

Conclusion: The incidence of CIN is high among patients undergoing contrast studies in Ile-Ife. Presence of multiple risk factors increases the risk of CIN with attendant risk of unfavourable outcome.

OR/ABS/NAN/2017/M003

PREVALENCE AND PREDICTORS OF HYPERTENSION AMONG URBAN COMMUNITIES IN KWARA STATE

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Background: Hypertension imposes significant burden on the global health and particularly the sub-Saharan Africa populations. The prevalence is growing in Nigeria which requires reappraisal for planning effective control strategies.

Objectives: To determine the prevalence and predictors of hypertension in urban communities in Kwara State.

Methods: This is a cross-sectional study of adults in eight urban communities in Kwara state. The blood pressure, body mass index (BMI), waist circumference, hip circumference, waist-hip ratio, random blood sugar and kidney lengths were measured. Hypertension is defined as a blood pressure (BP) \geq 140/90mmHg.

Results: 1506 adults participated in the study. The mean age was 44 ± 14 years, and 55% were females. The prevalence of hypertension was 30%. Hypertension correlates significantly with age ($r = 0.416$), BMI ($r = 0.301$), hip circumference ($r = 0.219$), waist-hip ratio ($r = 0.225$), and waist circumference ($r = 0.063$). The predictors of hypertension were: waist circumference (OR = 1.169, CI = 1.021 – 1.340), body mass index, (OR = 1.113, CI = 1.059 – 1.170), and age (OR = 1.052, CI = 1.034 – 1.070).

Conclusion: The prevalence of hypertension is high in urban populations of Kwara State and is driven by increasing age, body mass index and waist circumference.

OR/ABS/NAN/2017/M004

HISTOLOGICAL PATTERN OF RENAL DISEASE AMONG NEWLY DIAGNOSED HIV PATIENTS IN KANO, NORTHERN NIGERIA

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Backgrounds & Objectives: Renal involvement is one of the common presentations of Human Immunodeficiency Virus (HIV) infection and it has prognostic implication. Various types of renal diseases have been described among HIV infected patients though HIV Associated Nephropathy (HIVAN) is the most described among African Americans and among blacks in some other regions. Histological evaluation where indicated, is vital as certain renal diseases are exclusive to HIV infected population and have recommended specific treatment regimens. Most studies from Nigeria have limited numbers of biopsied patients. This study presents preliminary finding of the histological pattern of renal disease among HAART naive HIV patients in three (3) health centers in Kano.

Methods: In this prospective study, HIV positive patients aged 18 years and above with renal disease, defined by persistent Proteinuria and / or reduced GFR, with no contraindication to per cutaneous renal biopsy and have consented to undergo the procedure were studied. Kidney Biopsies were performed as an outpatient procedure and ultrasound guided. Tissues obtained were processed in the histopathology laboratory and specimens examined both under light microscopy and immunofluorescence microscopy.

Results: Twenty three patients with mean age of $38.7.2 \pm 9.6$, 14 males were studied. The mean CD4 count was $94 \text{ u/L} \pm 89$. Thirteen (56.5%) had classical HIVAN, 1 had HIV Immune Complex Kidney disease, No Specific Pathology was seen in 5, other pathologies in 4.

Conclusion: HIVAN is the most common histological presentation of renal diseases among HIV patients presenting to health facilities in Kano.

OR/ABS/NAN/2017/M005

CHANGING TRENDS OF RENAL HISTOPATHOLOGIC DIAGNOSIS IN ADULT NIGERIANS: IS IT REAL?

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Background: Renal biopsy is an essential tool in investigating renal disease.. Over the past few years, several authors have described changes in renal histopathologic diagnosis. Several factors may have contributed to this: including improvements in histopathological techniques, patient's demographic data, presence or absence of underlying disease or malignancy.

Methodology: We reviewed our database of renal biopsies done between the years 2005 and 2016. Findings from this review were compared to biopsies done between 1985 and 1991. The differences were analysed and noted.

Results: A total of 169 biopsies were done during the period under review. Membranoproliferative glomerulonephritis was the predominant type in biopsies done earlier (1985-1991), accounting for 50.8%. Focal segmental glomerulosclerosis predominated between 2012- 2016, accounting for 50.9%, showing a reversal that is hard to believe due to a real change.

Conclusion: It is clear that there is a changing trend of histopathological diagnosis made from renal biopsy slides. There is a transition from predominance of membranoproliferative to focal segmental glomerulosclerosis. Whether these reported changes are real or apparent is still unclear. We suggest that these differences may actually be due to reporting techniques and criteria and perhaps expertise. Perhaps it is time to review and standardize reporting of renal histopathology.

OR/ABS/NAN/2017/M007

ASSOCIATION OF INCREASED URINARY SODIUM EXCRETION WITH SYSTOLIC BLOOD PRESSURE IN FIRST DEGREE RELATIVES OF HYPERTENSIVE PERSONS

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UNIVERSITY COLLEGE HOSPITAL, IBADAN/UNIVERSITY OF IBADAN

Background: The knowledge of the risk factors for hypertension has led to a better understanding of the pathogenesis and importantly the prevention and reduction in the morbidity associated with the disease. In the Nigerian survey the odds ratio for hypertension in the offspring where both parents were hypertensive was 1.5 when compared with offspring with normotensive parents. Therefore, there is a risk that first degree relatives of hypertensives may develop hypertension.

Objectives: The study was carried out to determine if normotensives with positive family history of hypertension in both parents differ with respect to their urinary excretion of electrolytes.

Methods: This was a cross sectional study of sixty two subjects: normotensives first degree relatives of hypertensives, normotensives without family history of hypertension. Twenty four hour urinary collection for analysis of urinary sodium, chloride, potassium, urea and creatinine was carried out in the participants.

Results: The mean (SD) systolic blood pressures for subjects with and without family history of hypertension were 120.0(22.25) and 105.0(17.50) respectively ($p=0.001$). The mean arterial blood pressures were 86.4mmHg(10.2) and 80.1mmHg(8.1) respectively ($p=0.010$). The mean (SD) 24hour urinary excretion of sodium for normotensives with and without positive family history of hypertension were 180.5mEq/L(45.50) and 156.0mEq/L(36.25) respectively.

Conclusion: Systolic blood pressure and twenty four hour urinary excretion of sodium was higher in normotensive subjects with positive family history of hypertension than in those without family history of hypertension. Hence this group of people should be identified early and preventive measures should be instituted early to prevent the development of hypertension.

POSTER 1

PO/ABS/NAN/2017/A003

ETIOLOGY AND OUTCOMES OF ACUTE KIDNEY INJURY: A SINGLE CENTRE RETROSPECTIVE STUDY

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Introduction: Acute kidney injury (AKI) is a challenging problem in the developing world especially Nigeria because of the burden of disease, the lack of resources to support patients with established AKI and the late presentation of these patients to health care facilities, all these contribute to poor outcomes. This study sought to determine the aetiologies and outcome of acute kidney injury in our centre.

Methodology: We retrospectively reviewed data from all 86 patients with AKI admitted to Federal Medical Centre, owo during a 5year period. Data comprises of patients' demographics, aetiology, need for dialysis,

and reason for termination of dialysis, outcome, laboratory parameters and length of hospital admission. AKI was classified according to Kidney Disease Improving Global Outcomes criteria.

Results: There are 46(53.5%) males and 40(46.5%) females. The incidence of acute kidney injury in ICU is 3.5% (n=3). Sepsis, herbal concoctions and obstetric (PPH, eclampsia) were the main causes of AKI occurring in our hospital. 70.9% (n=61) were offered dialysis during the course of the admission. There is a correlation between aetiology, anaemia, reason for termination of dialysis, length of hospital admission and outcomes ($p < 0.05$). The overall mortality rate of 26.7% was noted.

Conclusion: AKI is common, with sepsis as the most common aetiology and it's associated with a significant increase in hospital stay and mortality especially in patients who require RRT.

POSTER 2

PO/ABS/NAN/2017/A005

ACUTE KIDNEY INJURY IN ICU: SEVERITY AND OUTCOME

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Background: Acute Kidney Injury (AKI) is a major contributor to poor patient outcome. It complicates 20-35% of admission in the Intensive Care Unit (ICU). This study set out to determine the Magnitude, Predictors and Mortality rate of AKI in our ICU.

Methods: Adults patients in the ICU were recruited consecutively and AKI was identified using RIFLE and AKIN criteria. Patient illness severity was assessed by using APACHE IV scoring system.

Results: Fifty Four (54%) of the 100 patients developed AKI (RIFLE and AKIN, $R = 0.692$, $p < 0.001$). These included 30 (55.6%) Males and 24 (44.4%) Females. The leading predictors of AKI in the ICU included Head injury in 13(24.1%), Advanced a significant association between carcinoma in 10 (18.5%), Sepsis in 8(14.8%), Obstetrics and cardiothoracic surgery had (9.3%) each. The median for serum creatinine (265.6 $\mu\text{mol/l}$) and mean potassium (4.1 ± 1.1 mmol/l). Forty, 40 out of the patients who had two or more organ failure died compared to only 7 that survived ($p < 0.001$). There was APACHE IV score and mortality rate as patients that survived and those that died had with a mean scores of 42.2 ± 16.9 , and 66.0 ± 23.2 , ($p < 0.0001$) respectively.

Conclusion: AKI is still very common in critically ill patients and presents with high morbidity and mortality rates.

POSTER 3

PO/ABS/NAN/2017/M001

COMPLEMENTARY GOVERNMENTAL SUPPORT FOR KIDNEY CARE IN NIGERIA, RENAL CAREGIVERS' ASSESSMENT

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Background: renal replacement therapy is unaffordable for majority of Nigerians. Less than 10% of all Patients requiring RRT actually receive it. Vast majority of patients starting hemodialysis die or stop treatment within the first 3 months of commencement because of financial constraints.

Objective: to examine nongovernmental support for kidney care in Nigeria as observed by renal caregivers.

Methodology: descriptive survey involving 109 renal caregivers across Nigeria. A structured questionnaire was used to collect Data. Data collected include among others, setting of practice, dialysis prices in their centers, how much of governmental support they receive for their patients, how much of nongovernmental support they receive for their patients, what they think of nongovernmental support for kidney care in Nigeria. Data were analysed using SPSS version 21.

Result: 83.5% of the participants work in tertiary Hospital. 40.4% have no patient who could sustain dialysis as prescribed for one month. 63.3% get poor governmental support for their patients. 67.9% get poor nongovernmental support for their patients. 45% think nongovernmental support for kidney care is urgently needed in Nigeria.

Conclusion: the burden of renal care is too much for patients in Nigeria. There is poor governmental and nongovernmental support in Nigeria. There is an urgent need for a well-coordinated, altruistic public-private support for kidney care in Nigeria.

POSTER 4

PO/ABS/NAN/2017/M002

RENAL BIOPSY: NAUTH EXPERIENCE

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Background: Renal biopsy is a procedure in nephrology practice used to extract renal tissues for histological diagnoses of renal diseases. It is a basic diagnostic tool in renal practice, regrettably, the practice is dying in developing countries like Nigeria possibly because of the challenges with skilled manpower in renal histopathology.

Objective: To review the NAUTH Nnewi experience in the tissue diagnoses of renal diseases.

Methodology: A retrospective review of our renal biopsy records of consenting adult patients who satisfied the unit's renal biopsy protocol between August 2012 and July 2014 was done. Ultrasound guided renal biopsy using semi-automatic spring loaded tru-cut needle was done in each patient. Samples were collected in freshly prepared formalin bottles and couriered to German cancer research centre for histopathological analysis. Data retrieved included sex, age, indication for biopsy.

Results: 21 renal biopsies were done within the study period, of these, 15(71.4%) were male while 6(28.6%) were females, the age ranged between 19 and 57years. Nephrotic syndrome was the commonest clinical indication for biopsy. Focal segmental glomerulosclerosis was the commonest histological pattern (81.0%). Other histologic diagnoses made include: Nodular glomerulosclerosis (4.8%) ,mesangiocapillary glomerulonephritis ,IgA nephropathy and membranous nephropathy.

Conclusion: The renal biopsy programme in NAUTH nnewi leaves so much room for improvement. The number of biopsies done were limited by the inability of patient to pay for the courier services, delays in retrieving results and language barrier. The need for locally trained renal histopathologist and equipment for analysis cannot be overemphasized for the sustenance of the renal biopsy practice in Nigeria.

POSTER 5

PO/ABS/NAN/2017/M006

THE IMPACT OF THE WORLD KIDNEY DAY ON THE KNOWLEDGE OF KIDNEY DISEASE AMONGST THE POPULATION

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Background: The World Kidney Day affords the Nephrologist the opportunity to expand the scope of the practice of preventive nephrology. Over the years, the number of participants of the WKD has increased as the publicity and awareness for the program have improved aided by the use of television/radio adverts. We believe that we should begin to explore the impact of this programme in the general population.

Methods: Sensitization was made via television and radio announcements as well as with the aid of banners. A structured interviewer administered questionnaire was used to collect information on the socio-demographics, knowledge of the common causes of kidney disease and common symptoms of the disease. Information on lifestyle was also collected.

Results: A total of 178 respondents were interviewed. Males constituted 63 (35.4%) and females (64.6%). Forty one percent (41%) were artisans/trader while 47.8% were civil servants. Sixty five percent (65.2%), 66.9%, 64%, 41% and 44.4% of the respondents were aware that kidney disease can be caused by hypertension, diabetes mellitus, herbs, bleaching creams and gastroenteritis respectively. Sixty eight percent (68%), 56.7%, 47.2%, 44.4% and 35.4% were aware of body swelling, bloody urine, and foamy urine; vomiting and hiccups are symptoms of kidney failure respectively.

Conclusion: Eventhough there are no data from previous years to compare, the percentages of the awareness of the causes and symptoms of kidney disease were found to be high during the WKD 2016.

POSTER 6

PO/ABS/NAN/2017/C012

PATTERN AND RISK FACTORS FOR CHRONIC KIDNEY DISEASE IN METABOLIC SYNDROME; PRELIMINARY FINDINGS (2)

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Background: Metabolic Syndrome comprises conditions that are established risk factors for the development and progression of Chronic Kidney Disease (CKD). We set out to determine the risk factors for CKD and to identify the pattern of renal impairment in adult patients with metabolic syndrome.

Methods: This is a hospital based cross-sectional study still on going at OAUTHC Ile-ife. Patients with features fulfilling the NCEP/ATP111 are being recruited consecutively. Anthropometric measurements as well as clinical data of patients are being taken using a structured pro-forma. Preliminary data obtained was analysed using SPSS version 20.

Results: A total of 25 patients have been recruited so far. Mean age of the population is 59.9 ± 10.0 . There is a female preponderance (60% of the studied population). Mean abdominal circumference is 110.25cm

while the mean Cr clearance is 49.25 ± 13.80 . 83.3% of the patients have Cr clearance of $< 60\text{ml/min}$ (stage 3 CKD).

Conclusion: CKD occurred in about two-third of the patients with MetS with the highest incidence clearly demonstrated in female patients and the elderly. There is a compelling need for aggressive screening of patients with MetS for early identification and management of CKD to retard its progression.

POSTER 7

PO/ABS/NAN/2017/C013

SCREENING FOR RISK FACTORS FOR KIDNEY DISEASE AMONG SECONDARY SCHOOL STUDENTS IN UMUAHIA, SOUTH-EAST NIGERIA

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Background: Prevention of chronic kidney disease (CKD) among children is possible if the risk factors for the disease are identified early.

Objectives: To obtain the prevalence of hypertension, proteinuria and obesity among children in an urban area in Umuahia.

Methodology: A cross sectional screening of Secondary School students below the age of 18 years as part of activities marking the World Kidney Day 2016 in Umuahia Abia State. The blood pressure, weight and height of each student was measured using standard methods. Urinalysis was performed using medi-test Combi-10 (Macherey Nagel, Germany) test strips. Hypertension and obesity were defined according to WHO criteria for children while significant proteinuria was regarded as dipstick of +1 and above. Data obtained was analyzed using SPSS version 20.

Result: A total of 225 students were screened. There were more females (58%) than males (42%). The mean age was 14.5 ± 2.4 years with age range of 11-17 years. Hypertension was found in 6.8%, obesity in 5.9% and significant proteinuria in 4.4%. There was a positive correlation between blood pressure and body mass index.

Conclusion: Risk factors for CKD are prevalent among the students studied. Detection and institution of appropriate measures may aid in prevention of CKD in children

POSTER 8

PO/ABS/NAN/2017/R003

INTRA-DIALYSIS BLOOD TRANSFUSION BURDEN AMONG CHRONIC KIDNEY DISEASE PATIENTS AT KIDNEY CARE CENTRE, ONDO STATE, SOUTH-WEST NIGERIA

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Introduction: Current guidelines prefer erythropoietin and parenteral iron to blood transfusion for the management of anaemia in chronic kidney disease (CKD) patients in order to avoid blood borne infections and allograft rejection. We set out to quantify blood transfusion rates among our dialysis patients and identify factors (if any) that determine blood transfusion among them.

Methods: A retrospective survey of patients' records conducted between January 2015 and December 2016. Data was analyzed with SPSS 20.

Results: One hundred and eighty four subjects (M:F=1.6:1) were surveyed. Mean age was 47.8±15.7 years. Fifty seven (31.0%) had chronic glomerulonephritis, 47 (25.5%) had hypertensive nephrosclerosis and 36 (19.6%) had diabetic nephropathy. Mean packed cell volume (PCV) before initiating dialysis was 23.14±5.4%. 113 (61.4%) received at least one unit of blood. Sixty (32.6%) received at least 4,000IU of erythropoietin. Number of blood transfusion correlated positively to the PCV before initiating dialysis (p=0.004, r²= -0.214), number of days on dialysis (p=0.001, r²=0.233), dialysis sessions (p=0.000, r²=0.374) and erythropoietin use (p=0.000, r²=0.258); Level of education correlated positively to erythropoietin use (p=0.016, r²=0.205) and number of dialysis (p=0.020, r²=0.198).

Conclusion: Blood transfusion rate among dialysis patients is high. Education of CKD patients is key to reducing blood transfusion burden in this population.

POSTER 9

PO/ABS/NAN/2017/R005

DEMOGRAPHIC CHARACTERISTICS, SURROGATES OF CARDIOVASCULAR BURDEN AND PREDICTORS OF OUTCOME IN A PREVALENT HAEMODIALYSIS POPULATION

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Introduction: ESRD has disproportionate economic burden, significant morbidity and mortality, all associated with varying spectrum of cardiovascular diseases and changing demography. We report demographic characteristics and factors predicting outcome among ESRD cohorts.

Methods: A cross-sectional review of data of 168 prevalent haemodialysis patients in a UK renal centre.

Results: Mean age was 62.6 ± 16.4 years. Males(59.5%) and Diabetes(29.8%), unknown(26.2%), chronic glomerulonephritis(14.9%) were the common causes of ESRD. 61.3% were married while 16.7% were single. 76.8% had AVF while 19.7% and 3% had permanent catheter and graft respectively. Mean haemoglobin was 107.9 ± 13.4g/dl with 85.7% on erythropoietin. 51.2% had repeat ECG while only 19.1% had no echocardiography done. 57.7% had repeat echocardiography(74.7% more than once). Only 1.8% had normal echocardiographic finding. Predominant cardiac abnormality was left ventricular hypertrophy. 40.5% had coronary angiography, only 21.4% had PCI. Mean ± SD albumin and total cholesterol was 38.5±4.1g/dl and 3.7±0.9mmol/l respectively. Patients with IHD are 1.6(0.6-4.4), 2.5(0.7-8.2), and 3.7(1.6-8.3), 7.4(3.0-17.9) and 4.5(2.1-9.6) likely to be on ACEI, ARB, statins, antiplatelets and â-blockers respectively. Presence

of any cardiovascular disease have increased odds of being placed on ACEI 2.1(0.8-5.6), ARB 3.7(0.9-14.1), statins 2.8(1.5-5.2), antiplatelets 3.6(1.9-6.8), β -blockers 2.5(1.3-4.6) and α -blockers 1.5(0.7-3.2). Mortality was 10.7%. Participants who died were 1.7(0.4-6.4), 4.6(1.2-16.6), 3.0(1.1-8.4) more likely to be on ACEI, statins and β -blockers respectively. They were also significantly older (71.2 ± 11.9 vs. 61.6 ± 16.6 years) and had low albumin (33.9 ± 5.4 vs. 39 ± 3.5 g/l) and total cholesterol (3.0 ± 0.7 vs. 3.8 ± 0.9 mmol/l)

Conclusion: The increased use of investigative modalities suggests high burden of cardiovascular disease and associated mortality.

POSTER 10

PO/ABS/NAN/2017/R006

PAEDIATRIC TRANSPLANTATION IN NIGERIA. THIRTY YEARS OF ONE STEP FORWARD TWO STEPS BACKWARDS

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Introduction: There is little information on paediatric renal transplants (PTxpt) in Nigerian children. PTxpt is the optimal treatment of pediatric patients with end-stage renal disease (ESRD). Outcomes are good and 800 PTxpts are performed yearly in USA

Objective: To study the outcome of 9 renal transplants that have been carried out in 8 Nigerian children

Methods: Data on PTxpt in Nigerian children from Email Questionnaire sent to Nigerian Nephrologists and Pub Med, Google, Medline, African Journals on Line Searches were obtained. Also incorporated were presentations at National, Regional and International Paediatric and Nephrology Conferences the author attended.

Results: There were 9 PTxpts (3 in Nigeria; 6 abroad) from 1986 to 2016 (30 years). Three of the 8 children have functioning grafts 4-14 years post-transplant; 3 died; 2 are on dialysis. Four of 297 with ESRD had renal transplants giving a PTxpt access rate of 1.3%.

Conclusion: The PTxpt rate in Nigeria is extremely low. It is the role of paediatric nephrologists to publicise the benefits of PTxpt and so increase availability.

POSTER 11

PO/ABS/NAN/2017/R008

PD IN NIGERIA: A DEAD OR DYING ART?

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Background: Peritoneal dialysis (PD) has been successfully used for renal failure in Nigeria since the 70s. Despite the increasing number of renal centers in the country PD use has progressively dwindled.

Aims and Objectives: To assess the use of PD for renal failure in Nigeria, identify the possible factors responsible for the dwindling use and define the perception of the responders on the role of PD in renal care.

Method: This cross-sectional study used a structured self-administered questionnaire on a cross-section of attending members during a recent National Nephrology Association meeting.

Results: A total of 116 respondents comprising of 68 doctors, 34 nurses, and 14 renal technicians participated in the study. Fifty eight respondents indicated past use of PD for renal failure treatment in their centers while the rest claimed it had never been used. The reported period since cessation of PD use and this study ranged from 6 months to over 4 years. The most important reason for stopping PD was PD fluid lack, while the most frequently encountered problem was financial constraint. Fifty five respondents gave a positive response to the need for reactivation of both PD training and use in renal centers in Nigeria.

Conclusion: PD is still perceived as an important option for renal failure treatment in Nigeria and effort at its reactivation should be actively pursued.