

Book of Abstract for the 27th Annual Scientific Conference Held in Calabar, Nigeria from 25th to 29th January, 2015

SCIENTIFIC SESSION 1A – King David HALL 11:00 – 13:00 (TUESDAY 27TH JANUARY 2015)

1. NAN/CN/2015- 01

USEFULNESS OF RENAL LENGTH AND VOLUME BY ULTRASOUND IN DETERMINING SEVERITY OF CHRONIC KIDNEY DISEASE

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Background: Chronic kidney disease (CKD) is one of the world's major public health problems with a rising prevalence. Failure to recognise CKD early is a missed opportunity to prevent or delay the development of end stage renal disease and its associated complications. Ultrasonographic service have become readily available, relatively cheap, result are reproducible and non-invasive may serve as a tool for detecting early cases of chronic kidney disease.

Aims and Objectives: This study is designed to determine the correlation of renal ultrasonic parameters and degree of kidney function in three hundred and twenty two CKD patients seen at UITH Ilorin.

Results: The results were analyzed with specific reference to socio-demography and correlating renal length and volume with estimated glomerular filtration rate. The male to female ratio is 2:1, with mean age of 45.06 (\pm 13.0) years. The serum creatinine range between 201 and 1205 μ mol/L with mean (\pm SD) 388.77 (\pm 168.5) μ mol/L, while eGFR mean was 18.21(\pm 7.19)ml/min. The right and left renal lengths range between 6.9 and 13.0cm with a mean of 9.11 (\pm 1.06), and 6.5-13.4cm with a mean of 9.23 (\pm 1.07) cm respectively. While the mean (\pm SD) volumes of the right and left kidneys were 98.54 (\pm 41.87) cm³ and 105.74 (\pm 46.23) cm³ respectively. The Pearson correlation of the right and left kidneys length to estimated glomerular filtration rate were -0.197 and -0.137 respectively and right and left kidney volume to estimated glomerular filtration rate were -0.122 and -0.043 respectively.

Conclusion: Our study showed that there is a positive correlation between ultrasonic renal measurements and degree of kidney function.

2. NAN/CN/2015- 02

COST EFFECTIVE APPROACH IN RETARDING PROGRESSION TO END STAGE KIDNEY DISEASE USING SODIUM BICARBONATE- A PRELIMINARY REPORT

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Introduction: Chronic kidney disease (CKD) is an established public health priority due to its global endemic nature. Acidosis is a major metabolic derangement in CKD and its degree correlates with severity of renal failure. The amelioration of metabolic acidosis, has been shown to confer benefits by retarding the progression of CKD. It is envisaged that with the wider application of a less cost intensive adjunctive therapy such as

sodium bicarbonate treatment, progression to end stage kidney disease (ESKD) could be significantly retarded in our pre-dialytic CKD patients, hence this study. In this study we, assessed the usefulness or otherwise of sodium bicarbonate therapy in our predialytic CKD patients and also evaluate its tolerability and adverse events that may be associated with it.

Materials and Methods: It is an open labelled, randomized, prospective study of 75 patients over a time period of 24 months. A total number of 67 participants have been recruited so far. Inclusion criteria included biochemical features of acidosis and a creatinine clearance of between 15 and 29mls/min per 1.73m². The participants were randomly assigned to receive either oral sodium bicarbonate tablets 600mg thrice a day in the treatment group or routine standard care. Standard treatment consisted of antihypertensives, insulin or oral hypoglycaemic agents- as indicated, erythropoietin injection and statin therapy. The patients clinical and biochemical parameters were monitored monthly and data was analysed using SPSS package version 17.

Results: There were a total of 50 patients with complete results as at the time of the review with a slight rise in the mean creatinine clearance in the subjects compared with the controls (P= 0.025). The mean creatinine clearance in the subject at commencement of the study was, 23.92ml/min, now 26.94ml/min as at the 6th month compared with the controls with a mean of 20.6ml/min, now 13.93ml/min. There is also a noticeable rise in the serum bicarbonate concentration in the subjects, with an increase to 22mmol/l from a baseline level of 20.5mmol/l, conversely in the control group, there was a reduction from 20.95mmol/l to 18.95mmol/l. There is no remarkable difference in the protein excretion in both groups. There were no adverse drug reactions in any of the subjects on sodium bicarbonate tablets.

Conclusion: Sodium bicarbonate therapy is a potentially useful cost effective medication in retarding progression of CKD. This is particularly relevant in resource limited settings where renal replacement therapy is unaffordable by majority of ESKD patients with consequent worsening of clinical outcomes.

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3. **NAN/CN/2015-03**
PATTERN OF DYSLIPIDEMIAS IN CHRONIC KIDNEY DISEASE AND POST TRANSPLANTATION

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Introduction: Dyslipidemias is a major cardiovascular risk factor in chronic kidney disease and a linear relationship exists between lipid levels and cardiovascular risks. There are few data that have looked at the serum lipids patterns in patients across the spectrum of chronic kidney disease and on renal replacement therapy in our setting.

Methods: This is a cross sectional study of the clinical data of 45 randomly selected patients. These was made up of 15 patients with proteinuric CKD (protein levels > 1g/day), 15 non proteinuric patients, 15 patients on maintenance hemodialysis and 15 post kidney transplantation patients. Lipid levels were determined at onset for the proteinuric patients, on commencement and at 6 months on dialysis and at 3, 6 and 9 months after kidney transplantation.

Results: The mean cholesterol value was highest in proteinuric CKD patients (8.22mmol/l), with LDL and triglyceride concentration of 5.490mmol/l and 2.24mmol/l respectively. Post renal transplant patients had a mean LDL of 2.55mmol/l and a mean total triglyceride of 1.37mmol/l after 9 months on immunosuppressive medications

Conclusion: Apart from the typical dyslipidemic profile in patients with proteinuric CKD, there was not much difference in terms of lipids profile in the other groups of patients namely; the post kidney transplant patients, this can be explained possibly by the pre/post -transplant statin therapy, the peculiar immunosuppressive protocol in this group and use of high flux polysulfone membranes in the dialysis group.

4. NAN/CN/2015 - 04

BLOOD PRESSURE CONTROL IN PRE-DIALYSIS CHRONIC KIDNEY DISEASE PATIENTS IN UNIVERSITY OF BENIN TEACHING HOSPITAL

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Introduction: Chronic kidney disease is associated with increased cardiovascular morbidity and mortality. Hypertension is an independent risk factor for end-stage renal disease and promotes a decline in glomerular filtration rate (GFR) in both diabetic and non-diabetic kidney disease. The aim of this study was to assess blood pressure control amongst pre-dialysis CKD patients attending the renal outpatient clinic.

Methods: The average of three most recent consecutive clinic blood pressure readings of patients attending the Renal Outpatient Clinic of UBTH over a six month period (December 2013 to June 2014) were obtained from patients' case files. Other variables obtained include age, sex, number of blood pressure medications and presence of proteinuria.

Results: A total of 103 pre-dialysis CKD patients made up of 53 males, 50 females and with a mean age of 49.6 ± 17.4 years were on clinic follow up during the period of study. Sixty-four patients (62.1%) had proteinuric kidney disease, 26 (25.2%) had estimated GFR (eGFR) less than 30mls/min while 36 (35%) and 22 (21.4%) had hypertensive nephropathy and diabetic nephropathy respectively. Poor blood pressure control (taken as systolic BP ≥ 140 mmHg or diastolic BP ≥ 90 mmHg) was seen in 46 (44.6%) patients. The proportion of patients with poor BP control was highest among those with diabetic nephropathy (68.2%) followed by hypertensive nephropathy (56%) and chronic glomerulonephritis (35.7%).

There was significant association between number of BP drugs consumed by patients and BP control such that patients with poor BP control tended to be on 3 or more BP drugs ($p < 0.001$). Patients aged 40-59 years were on higher number of BP drugs compared to other age groups ($p = 0.024$). Male patients were on more BP drugs compared to female patients ($p = 0.002$) while patients with $eGFR < 60$ mls/min were on more BP drugs compared to those with $eGFR \geq 60$ mls/min ($p = 0.01$).

Conclusion: This study shows that poor BP control is commonest among patients with diabetic kidney disease and hypertensive nephropathy. Particular attention should be paid to these groups of patients to ensure better BP control.

5. NAN/CN/2015 - 05

THE IMPACT OF STRUCTURED DIETARY PROGRAM ON ATTITUDE TO DIETARY PRESCRIPTIONS AND COMPLIANCE AMONG IN-PATIENTS AT KIDNEY CARE CENTRE ONDO.

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Introduction: The care of renal failure patient ideally should be multi-disciplinary with the dietitian as one of the major players. This is because nutrition is an essential component in the management of such category of patients and therefore needs to be prescribed, evaluated and monitored for optimal effect under strict supervision of certified dietitians.

Objectives:

- To determine the attitude to healthy diets and level of compliance among in-patients.
- To identify common dietary prescriptions for in-patients at a renal hospital.
- To highlight the impact of structured dietary programme on compliance.

Methodology: This was a retrospective study of consecutive patients admitted between March and November 2014 at Kidney Care Centre Ondo. Their bio-data, medical history, biophysical profiles, dietary history and dietary prescriptions were obtained via review of patient's case notes, laboratory and dietary record. Recognised interventions such as dietary assessment, counseling, dietary adjustment, regular monitoring and conferences with the nephrologist and nurses were also obtained. A structured 'dietary calendar' was used to calculate level of adjustment, compliance and tolerance. Data was analysed using SPSS 16.0.

Results: A total of eighty eight in-patients (age range 16 - 88 years) were admitted within a 9 month period (March to November 2014). Out of these, 77 had renal impairment; twelve (15.6%) had AKI, 64 (83.1%) had CKD while 1 (1.3%) had Chronic Allograft Nephropathy. Chronic glomerulonephritis (42.2%) and diabetic nephropathy (21.9%) were the most common aetiologies of CKD. There were 48 males and 29 females (M:F, 1.7:1). The mean age was 47.1 ± 17.1 years. The mean SBP was 154.3 ± 30.3 mmHg while mean DBP was 94.2 ± 20.4 mmHg. Hypertension was the most common co-morbidity (75.3%). The Mean BMI was 24.6 ± 5.5 Kg/m²; 41.5% of the subjects had BMI above normal range. The serum creatinine was 1028.8 ± 777.1 µmol/L. The serum albumin was 30.8 ± 7.1 g/l; 79.0% had hypoalbuminaemia. The total cholesterol was 4.3 ± 1.7 mmol/l; 22.6% had total cholesterol (TC) above the ideal range while 35.5% had TC below range. Forty-five (58.4%) had a poor attitudinal score to healthy diet: 54.5% skipped meals (mainly lunch), majority used palm oil (96.1%) and vegetable oil (90.9%) for cooking; none used soya, olive or groundnut oil. 70.1% took animal entrails, 7.8% and 9.1% took fruit and vegetable respectively on a daily basis. The most frequently prescribed diets for in-patients were low salt (97.4%), low protein (77.9%), high protein (3.9%) and trace protein (7.8%) diets. The forms of diet included liquid diet (3.9%), blenderized diet (6.5%) and soft diet (14.3%). Tolerance rate, compliance rate and adjustment rate was 83.1%, 89.6%, and 89.6% respectively. Only one out of 18 (5.6%) respondents had a poor attitudinal score after administering the structured dietary programme.

Conclusion: The general attitude of patients to globally accepted healthy diet was found to be poor. The use of the structured dietary programme in the care of renal failure patients contributed significantly to attitudinal change of in-patients to healthy diet, improved tolerability and compliance. Dietary assessment, counselling, dietary adjustment, regular monitoring and conferences with the nephrologist and nurses were the main components of structured dietary program employed to ensure compliance and tolerability.

6. NAN/CN/2015 – 06

SOME HAEMATOLOGICAL PROFILE OF CHRONIC KIDNEY DISEASE PATIENTS AT THE UNIVERSITY OF BENIN TEACHING HOSPITAL.

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Background: Anaemia is a common feature/complication of chronic kidney disease (CKD) decreasing as renal function deteriorates. It remains a significant independent cardiovascular risk factor. With the global burden of CKD on the increase, anaemia ought to be sought for and managed aggressively.

Objectives: To review the haematological profile in CKD patients managed in UBTH and to determine the relationship of the profile with severity of CKD.

Method: A retrospective review of the records of 942 patients (in/outpatients) managed by the Nephrology Unit of UBTH between January 2009 – Dec 2013 was done. Demographic and haematological data were collated and analyzed using SPSS version 21.0. Anaemia was defined as Hb < 11g/dl while GFR was assessed using MDRD formula. Results are expressed as frequencies, percentages, and mean ± SD, level of statistical significance was set at $p < 0.05$ for all comparisons.

Results: The 942 cases reviewed consisted of 518 (55.0%) males and 424 (45.0%) females (M:F = 1:0.82). Their mean age was 46.06 ± 13.39 years while the mean GFR was 14.84 ± 8.91 ml/min/1.73m³ with 9.7%, 16.6% and 73.8% of the patients in stage III, IV and V CKD respectively. All 942 patients had FBC records, 304 patients had peripheral blood film records and none had records of iron studies. The mean Hb concentration, mean WBC and mean platelet counts were 7.43 ± 1.83 g/dl, $7.0 \pm 2.4 \times 10^9$ /L and $154.7 \pm 56.5 \times 10^9$ /L respectively. Anaemia was present in 887 (94.2%); microcytic anaemia was the predominant blood picture on peripheral blood film and was present in 798 (84.7%) patients. Majority of the patients had normal WBC (86.5%) and platelet count (92.3%). The mean Hb of the pre-dialytic patients was significantly but marginally higher than those on dialysis (7.5 ± 1.7 vs 7.1 ± 1.5 g/dL, $p = 0.006$) while mean MCV was lower in the pre-dialytic group compared to patients on dialysis (66.5 ± 8.6 vs 67.9 ± 8.6 , $p = 0.031$).

Conclusion: Majority of patients were anaemic. Haemoglobin concentration reduced with deteriorating renal function. More attention needs to be placed on haematological assessment of patients with CKD, including iron studies.

7. NAN/CN/2015 – 07

PREVALENCE AND PATTERN OF PRURITUS AMONG PATIENTS WITH END-STAGE RENAL DISEASE SEEN IN A TEACHING HOSPITAL IN SOUTHERN NIGERIA

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Background: Pruritus is a common symptom in patients with end-stage renal disease (ESRD). It is defined as an unpleasant sensation of the skin that provokes the urge to scratch. It occurs independent of the cause

of ESRD, and patients on both haemodialysis and peritoneal dialysis experience pruritus at similar rates. It negatively affects quality of life and is an independent predictor of increased mortality, probably because of its effect on the quality of sleep. There is paucity of data from Nigeria on pruritus among patients with ESRD.

Aim: To determine the prevalence and pattern of pruritus among patients with ESRD who are on maintenance haemodialysis in the University of Benin Teaching Hospital (UBTH), Nigeria.

Methodology: The study was carried out in the dialysis unit of UBTH among consenting adult patients with ESRD undergoing maintenance HD. Relevant clinical and laboratory parameters were obtained using a structured questionnaire divided into three sections. The data collated was analyzed using SPSS version 20.0 package.

Results: A total of 74 patients were recruited. These consisted of 43 (58.1%) males and 31 (41.9%) females. Pruritus was present in 34 (45.9%) of patients. More females (52.9%) had pruritus but this was not statistically significant. Majority (20.3%) had itching with scratching, but no excoriations. Only 5 (6.8%) had severe pruritus. Most of the itches occurred at the back (61.7%) and were mainly scattered itches. The mean serum urea, calcium, phosphate and calcium/phosphate product of patients with pruritus were 143 ± 33 mg/dl, 6.9 ± 1.0 mg/dl, 10.5 ± 1.2 mg/dl and 72.1 ± 11.3 mg/dL and were significantly higher than those in patients without pruritus ($p<0.05$ in all).

Conclusion: Pruritus is prevalent among patients with ESRD on maintenance haemodialysis. Most of it occurs at the back. The serum urea, calcium, phosphate and calcium/phosphate product are significantly associated with it.

8. NAN/CN/2015 – 08

PREVALENCE AND PATTERN OF PRESENTATION OF NEPHROLITHIASIS IN A TERTIARY HEALTH CENTRE IN LAGOS STATE (LASUTH)

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Nephrolithiasis has been shown to differ in prevalence in Nigeria, especially influenced by geographical distribution and climatic conditions. We however studied the prevalence, pattern of presentation and urinary component of nephrolithiasis at Lagos State University Teaching Hospital (LASUTH).

Methods: This study was a retrospective study of all the renal cases seen at Lagos State University Teaching Hospital (LASUTH), between the period of June 2008 to November 2014, involving a total of 22 patients diagnosed with nephrolithiasis.

Result: Total numbers of 1,524 patients were seen during the study period of which 22(1.4%) had nephrolithiasis. There were 12 (54.5%) females and 10 (45.5%) males, with female to male ratio of 1.2:1. Age range was 19 to 70 years. Commonest presentation was flank pain which was 13 (59.1%), followed by haematuria and fever 7 (31.8%) each, suprapubic pain was 5 (22.7%), lion pain was 4 (18.2%). Investigations findings revealed that abdominal ultrasound scan identified renal stones in 11 (50%) of patients, and urinary tract infection was confirmed in 2 (9%), urinary PH ranged from 5.0 to 8.0, hypercalciuria was present in 6 (27%), hypocitraturia was 4 (18.2%), hyperuricosuria 2 (9%), hyperoxaluria, hyperphosphaturia were both 1(4.5%), and hyperphosphataemia was 1 (4.5%).

Conclusion: Nephrolithiasis is relatively common in Lagos, and commoner in females, with age range from 19 to 70 years. Commonest presentation was flank pain, followed by haematuria and fever, and the commonest urinary abnormality hypercalciuria and hypocitraturia, with associated urinary tract infection involving urease splitting organism, and abdominal ultrasound scan was found to be sensitive in detecting renal stones.

SCIENTIFIC SESSION 1B – Queen Esther HALL 11:00 – 13:00 (TUESDAY 27TH JANUARY 2015)

9. NAN/DI/2015 - 01

CLINICAL PROFILE AND OUTCOME OF HAEMODIALYSIS TREATED PATIENTS IN NEW DIALYSIS FACILITIES IN SOUTHEAST NIGERIA

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Introduction: Haemodialysis is the modality of renal replacement therapy readily available in Nigeria. The use of peritoneal dialysis is limited by the unavailability and high cost of peritoneal dialysis fluids. Kidney transplantation is available in few centres in Nigeria and only a privileged few can afford it.

Aim: To assess the clinical characteristics and outcome of adult patients dialysed in two new dialysis facilities in Umuahia, Southeast Nigeria, between February 2013 and August 2014.

Methods: A retrospective review of case records and hemodialysis registers.

Results: A total of 141 patients received haemodialysis during the period. There were 83(58.9%) males and 58 (41.1%) females with a male: female ratio of 1.4:1. Their mean age was 47.3±16.3 years. The clinical diagnoses were acute kidney injury (AKI) in 23 (16.3%) patients and end-stage renal disease (ESRD) in 118 (83.7%) patients. The most common causes of AKI were pre-renal in 11 (47.8%), eclampsia in 5 (21.8%) and severe sepsis in 4 (17.4%). Commonest causes of ESRD were hypertension (24.1%), chronic glomerulonephritis (19.1%), diabetes mellitus (13.5%) and unknown in 7.1%. Most common vascular access was femoral and peripheral veins in 102 (72.3%) and tunnelled catheters in 28 (19.8%) patients. The commonest intra-dialytic complication was hypertension in 46.2%. Of the 118 ESRD patients, only 2 (1.7%) could afford adequate dialysis. Fifteen (65.2%) AKI recovered renal function. Two patients (1.7%) with *ESRD could afford the cost and underwent renal transplantation*, 53 (44.9%) were lost to follow up, 41 (34.7%) are still on hemodialysis (albeit inadequate) while 24 (20.3%) were recorded dead.

Conclusion: Hypertension was the commonest cause of ESRD from this study. Most common aetiology of AKI was pre-renal. Majority of the patients cannot afford adequate dialysis. Renal transplant is beyond the reach of almost all patients due to prevailing poverty in the country.

10. NAN/DI/2015 - 02

EARLY VERSUS LATE INITIATION OF HEMODIALYSIS AND ITS DETERMINANTS; A MULTICENTRE EXPERIENCE IN SOUTH-EAST NIGERIA.

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Background: The proportions of patients with end-stage renal disease (ESRD) initiating haemodialysis (HD) at higher glomerular filtration rate (GFR) has increased during the past decade especially in developed countries. Co-morbidities do not appear to be the major driving force for early initiation of dialysis. There is paucity of data from developing countries with regards to determinants of HD initiation in patients with ESRD.

Aim: To determine the GFR at initiation of dialysis among ESRD patients undergoing HD at Federal Medical Centre and Abia Specialist Hospital, Umuahia Abia State.

Method: The dialysis records of patients who had haemodialysis between February 2013 and September 2014 were reviewed. Data for socio-demographic characteristics, diagnosis and relevant laboratory investigation findings at presentation were collated. Early dialysis was defined as commencement of HD at GFR above 10mls/min/1.73m². Clinical variables were compared between the patients who commenced early and those who commenced late.

Results: The 141 patients reviewed included 83 males and 58 females, male: female ratio was 1.4:1. The mean age of the patients was 47.2±16.3 years. Hypertension was the leading cause of ESRD found in 24.1% of the patients, while the mean GFR at commencement of HD was 6.8±2.5mls/min/1.73m². All patients had uraemic symptoms at initiation of HD. 14.2% had early dialysis. The mean age of patients who had early dialysis was significantly lower than those who dialysed late (40.45±17.7 vs 48.4± 15.9 years respectively, p=0.044). Underlying diagnosis of hypertension was associated with early dialysis (OR=2.43; 95% CI= 1.63 to 3.62; p<0.001).

Conclusion: Most patients commenced HD late. Younger age and underlying diagnosis of hypertension tend to influence early initiation of HD in our patients.

11. NAN/DI/2015 - 03

PREDICTORS OF INTRADIALYSIS MORTALITY AT THE UNIVERSITY COLLEGE HOSPITAL, IBADAN.

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Background: Intradialysis mortality is a major source of concern worldwide. Though haemodialysis is a lifesaving treatment for renal failure, the procedure may be complicated by intra-dialysis death. To prevent untoward events during haemodialysis, patients are adequately prepared and the steps include optimization

of haemoglobin level, blood pressure, attention to the dialysis machines and use of appropriate fluids, just to mention a few. This study aimed to identify the predictors of intradialysis death among patients dialyzing at the University College Hospital, Ibadan.

Method: In this retrospective study, we reviewed the dialysis records of all patients at the University College Hospital, Ibadan between January 2009 – November 2014.

Results: A total of 1,105 patients were dialyzed over the period, 654(59.1%) males and 451(40.8%) females, 11,028 sessions of haemodialysis were offered. AKI and CKD were the indications in 256(24.3%) and 799(75.7%) respectively. Thirty-nine (3.5%) patients died intradialysis, 12(30.8%) with AKI while 27(69.2%) had CKD. The mean age of patients who died and those who survived were similar 44.8 ± 20.9 vs 44.4 ± 18.0 years, $P=0.78$. The mean pre-dialysis SBP and DBP were significantly lower in those patients that died (125 ± 17.8 vs 132 ± 21 mmHg, $P=0.03$) and (79.4 ± 16.9 vs 84.3 ± 16.7 mmHg, $P=0.02$) respectively. The mean intra-dialysis SBP and DBP among the two groups were (122.9 ± 44.0 vs 128.2 ± 46.0 mmHg, $P=0.01$) and (75.1 ± 35.1 vs 79.8 ± 37.4 mmHg, $P=0.04$) respectively. The mean haemoglobin concentration of 7.6 ± 2.0 vs $8.9\pm$ g/dl, $P=0.04$. Patients who died were more likely to have had lower pre-dialysis SBP (OR 1.5), pre-dialysis DBP (OR 2.1) and haemoglobin level (OR 1.4)

Conclusion: Low pre-dialysis systolic, diastolic blood pressures and haemoglobin concentration were independent predictors of intra-dialysis mortality. Optimization of pre-dialysis blood pressure and haemoglobin concentration will help to reduce the mortality associated with haemodialysis

12. NAN/DI/2015 - 04

AN AUDIT OF BLOOD PRESSURE CHANGES DURING HAEMODIALYSIS: A SINGLE CENTRE EXPERIENCE IN SOUTHERN NIGERIA

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Introduction: Patients on dialysis tend to have fluctuations in blood pressure (BP) with intra-dialytic hypotension estimated to occur in 15-55% of treatments and intra-dialytic hypertension observed in about 15% of patients. Intra-dialytic hypertension has been associated with higher mortality among patients on long term dialysis while intra-dialytic hypotension has been associated with loss of residual renal function.

The aim of this study was to assess variations in blood pressure during dialysis and determine the prevalence of intra-dialytic hypotension and hypertension among patients on dialysis therapy.

Methods: A retrospective 3 year survey of patients on dialysis for end-stage renal disease (ESRD) and AKI from January 2010 to December 2012. Blood pressure readings of 3 consecutive dialysis sessions were obtained from patients' case records and average systolic blood pressure (SBP), diastolic blood pressure (DBP) and mean arterial pressure (MAP) obtained at onset of and 2 hours into dialysis.

Results: A total of 217 patients were dialysed during the period of study: 184 (84.8%) had chronic kidney disease and mean age was 42.5 ± 17.4 years. At onset of dialysis, 146 (67.3%) patients had elevated SBP while 149 (69%) had elevated MAP. Patients with CKD had higher baseline mean SBP and mean MAP compared to those with AKI ($p=0.029$ and 0.036 respectively). Females had significantly higher BP variation compared to males (11.7 ± 11.2 vs 7.01 ± 6.1 mmHg, $p<0.001$). Patients with hypertensive kidney disease had significantly higher BP variation compared to those with DM nephropathy (12.4 ± 12.3 vs 7.5 ± 8.1 mmHg, $p=$

0.04), chronic glomerulonephritis (12.4 ± 12.3 vs 7.8 ± 6.4 mmHg, $p = 0.005$) and HIV-related kidney disease (12.4 ± 12.3 vs 6.9 ± 7.7 mmHg, $p = 0.018$). The prevalence of intra-dialytic hypertension and hypotension was 5.1% and 23.1% respectively.

Conclusion: Female gender and hypertensive kidney disease was associated with higher BP variation. Patients with elevated MAP at onset of dialysis tend to also have elevated MAP at 2 hours into dialysis. Intra-dialytic hypotension was more common compared to hypertension in this population of patients.

13. NAN/DI/2015 - 05

A ONE-YEAR REVIEW OF HAEMODIALYSIS AT ABIA STATE UNIVERSITY TEACHING HOSPITAL ABA; CHALLENGES AND CALL FOR SUSTAINABILITY

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Background: Haemodialysis (HD), as a mode of treatment for patients with end-stage renal disease (ESRD) and acute kidney injury (AKI), is available in most states of Nigeria today. Cost constraints has limited its full utilization by the patients as a life- saving treatment. However, an audit of our practices will enable us identify other areas for improvement.

Aim: To review the haemodialysis performance over a one-year period in a Nigerian Teaching Hospital.

Methodology: A retrospective review of dialysis records and case notes of adult patients who received HD therapy between October 2013 and October 2014. Data retrieved included age of the patients, gender, diagnosis, aetiology of ESRD, pre-dialysis investigation findings, type of vascular access, frequency of dialysis and outcome.

Results: Eighty one patients had haemodialysis within the period reviewed with a total of 191 sessions. There were 53 (65.4%) males and 28 (34.6%) females with a mean age of 50.4 ± 17.3 years. The commonest causes of ESRD were hypertension in 17 (21%), Chronic Glomerulonephritis in 16 (19.8%), Diabetes Mellitus in 15 (18.5%) and unknown in 6 (7.4%). Acute kidney injury was the underlying diagnosis in 11 (13.6%) of patients. The pre-dialysis median serum creatinine was 368 (range: 269-2190) $\mu\text{mol/L}$ while the mean haemoglobin was 8.3 ± 2.3 g/dL. Vascular access was predominantly femoral and peripheral veins. Commonest intra-dialytic complication was hypotension in 28 (34.6%). Of the patients with ESRD, majority (51.4%) were on once weekly HD while no patient was thrice weekly HD. At the time of this review, most of the patients (72.8%) were lost to follow up, 12.8% were recorded dead while 14.2% are alive. No patient had renal transplantation. All the patients with AKI had full recovery of renal function.

Conclusion: Hypertension was the commonest cause of ESRD our patients. None was adequately dialyzed and most were lost to follow up.

14. NAN/DI/2015 - 06

ASSESSMENT OF INTRADIALYTIC COMPLICATIONS AMONG PATIENTS RECEIVING HAEMODIALYSIS AT ABIA SPECIALIST HOSPITAL AND DIAGNOSTIC CENTRE UMUAHIA

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Background: Hemodialysis (HD) is the commonest method of renal replacement therapy for Nigerian patients with end-stage renal disease (ESRD). Despite the technological advances and better understanding of physiology associated with hemodialysis, a number of complications are known to be associated with hemodialysis.

Aim: To study the frequency and types of intradialytic complications in patients undergoing hemodialysis for renal failure a new Dialysis Unit in Southeast Nigeria.

Methodology: A retrospective study conducted at the Dialysis Unit of Abia Specialist Hospital and Diagnostic Centre Umuahia. Records of all patients who had dialysis over a one-year period were reviewed. The socio-demographic information, aetiology of renal failure, number of HD sessions, intradialytic blood pressure readings and recorded complications were collated. Data was analyzed using SPSS version 21.0

Results: Data for 97 patients with 660 episodes of HD was analyzed. Mean age of the patients was 46.5 ± 16.6 years. Patients with acute kidney injury comprised 11 (11.7%) while ESRD comprised 86 (88.7%). Commonest cause of ESRD was hypertension and found in 27 (31.3%). Intradialytic complications were seen in 218 (33.0%) of dialysis sessions. Hypotension was the commonest complication and found in 172 (26.1%) sessions. This was followed by hypoglycemia in 163 (24.7%) sessions, hypertension in 145 (22.0%), vomiting in 61 (9.2%), headache in 54 (8.2%) and backache and cramps in 42 (6.4%). Bleeding from vascular access, fever, cramps and backache were each found in <5% of sessions.

Conclusion: Acute complication of haemodialysis is not uncommon in our centre. Intradialytic hypotension and hypoglycemia were the commonest encountered. Clinical vigilance and closer monitoring of patients undergoing haemodialysis is necessary to detect these complications

15. NAN/DI/2015 - 07

OUTCOMES OF ARTERIOVENOUS FISTULA FOR MAINTENANCE HAEMODIALYSIS AT UNIVERSITY OF BENIN TEACHING HOSPITAL, BENIN CITY, NIGERIA

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Background: Ideally, patients should have a functional permanent vascular access (VA) at the initiation haemodialysis (HD). Autogenous arteriovenous fistulas (AVF) are preferred permanent VA because of its

low rate of complication, ability to deliver sufficient blood flow to achieve adequate dialysis and its cost effectiveness in both creation and maintenance. Maturation of AVF (and complications related to usage), primary failure, patients' death before fistula maturation and lost to follow up are commonly reported outcomes in literature.

Aim: To evaluate the six-year outcomes of performing AVF for haemodialysis at the University of Benin Teaching Hospital, Benin City, Nigeria.

Methodology: A retrospective study from July 2009 and September 2014. Surgical records and dialysis registers and case notes of patients who had AVF creation for maintenance haemodialysis were reviewed. The socio-demographic data, aetiology of ESRD, number of sessions of HD for each patient following first needling of AVF and reason for non usage of created AVF were collated.

Results: Ninety three patients had AVF created, 56% were males while 44% were females. Mean age was 42.1 ± 8.4 years. Hypertension was the commonest cause of ESRD and found in 31.2%. All patients had pre-operative assessment for fistula construction. Majority of the fistula (71; 76.3%) were done as radiocephalic AVF. Among these 93 patients, 63 (67.7%) were followed up while the others were either lost to follow up (23; 24.7%) or died before using the AVF (7; 7.5%). Of the 63 patients followed up, the AVF matured in 42 (66.7%) while primary failure occurred in 21 (33.3%). Those with primary failure were significantly older and predominantly females. Some documented complications encountered during AVF usage include thrombosis in 5(5.3%) and aneurysm in 6(6.4%).

Conclusion: More than two-thirds of the patients followed up had functional AVF. Primary AVF failure was commoner in females and older patients.

16. NAN/TR/2015 - 01

KIDNEY TRANSPLANT RELATED MEDICAL TOURISM-A SINGLE CENTRE EXPERIENCE

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Background: Kidney transplant remains a viable option in the management of patients with end stage renal disease. Despite its wide availability worldwide, kidney transplant is still in a rudimentary stage in Nigeria. We therefore set out to review our experience with kidney transplant tourism amongst our end stage renal disease patients.

Methodology: This is a retrospective study of all our end stage renal disease patients enrolled into the dialysis programme over a seven year period (1st July 2007 to 30th June 2014). Data retrieved was analyzed using SPSS Version 17. Descriptive statistics was used to describe relevant variables. P value < 0.05 was considered significant.

Results: A Total of Five hundred and ninety five ESRD patients were enrolled into our haemodialysis programme. Out of these, 406 (68.2%) were males and 189 (31.8%) were females. Their mean age was 42.28 ± 17.06 years (range 9 - 98 years). Of the 595 patients, only 21(3.53%) patients left our facility for the

purpose of kidney transplant evaluation over the seven year period. Of these, 11 were males (52.4%). Fifteen (71.4%) patients visited India, followed by Egypt (19%), AKTH (4.8%) and UAE (4.8%). Eight patients (38.1%) were transplanted, 12 (57.1%) returned to our centre without a transplant and one (4.8%) patient is still in India awaiting transplant. Out of the 8 patients that were transplanted, 4 (50%) are alive, 3 (75%) died of Allograft rejection and one (25%) died of Stroke. Of the 13 patients that were not transplanted, only 2 (15.4%) are alive. Reasons for not being transplanted include lack of eligible donor in 4 (33.3%) patients, Multiple Myeloma in 2 (16.7%), Pericarditis in 1 (8.4%), Liver Cirrhosis in 1(8.4%) and Hepatitis C Infection in 1 (8.4%) patient.

Conclusion: Kidney transplant uptake from our centre is low. Survival for those patients who were transplanted is better than in patients who were not transplanted. A local transplant programme needs to be encouraged to give our patients a better quality of life.

17. NAN/TR/2015 - 02

PERCEPTION AND ATTITUDE OF RESIDENT DOCTORS IN NIGERIA TOWARDS KIDNEY DONATION AND TRANSPLANTATION

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Background: Successful kidney transplantation depends on multiple factors such as legislation, implementation agencies, knowledge and attitude of health care workers, potential donor and recipient; and financial support. Little is known about the knowledge and attitude of doctors in Nigeria towards this life-saving mode of treatment.

Methods: Self-administered questionnaires were distributed to resident doctors in diverse sub-specialties attending a revision course at the University College Hospital Ibadan Nigeria in August 2013. The questionnaires were designed to elicit their knowledge and attitude towards kidney transplantation.

Results: A total 465 questionnaires were completely filled. Respondents were spread across the different sub-specialties made up of 32.7% in internal medicine, 28.2%, 18.9%, 9.9%, and 10.3% in community medicine, surgery, family medicine and others respectively. Among them, 91.8% believe that kidney transplantation is a definitive treatment for ESRD and 95% had good knowledge of kidney transplantation. There was a significant difference between the mean knowledge scores across the different sub-specialties ($F= 12.004$, $p<0.01$); surgical residents had a higher mean knowledge score compared to others. Barriers to successful kidney transplantation identified by respondents were cost of transplantation in 94%, availability of eligible donor and apprehensiveness on the part of the patient in 83.2% and 71.2% respectively. Up to 67.3% were willing to donate a kidney if necessary. Neither the geo-political zone of practice ($F=1.174$, $p=0.32$) nor religious inclination ($F=0.807$, $p=0.37$) had influence on attitude to kidney donation.

Conclusion: Nigerian doctors have good knowledge of kidney transplantation and good attitude towards it. Financial constraints and availability of eligible donors are major identified barriers to successful transplantation.

SCIENTIFIC SESSION 2A – KING DAVID HALL 16:00 – 17:00 (TUESDAY 27TH JANUARY 2015)

18. NAN/CN/2015 – 09

ECHOCARDIOGRAPHIC ABNORMALITIES IN PATIENTS WITH CHRONIC KIDNEY DISEASE IN ILORIN, THE NORTH-CENTRAL ZONE OF NIGERIA

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Background: Cardiovascular Disease (CVD) is the leading cause of morbidity and mortality in patients with CKD at all stages. The risk of cardiovascular events (hospitalization for CAD, HF, Stroke or death) increases as GFR falls. Echocardiogram is an invaluable tool for assessing CVD in all categories of patients at risk. The description of pattern of CVD through echocardiogram (Echo) in patients with CKD is an initial step in the designing of a framework for CVD epidemiology, intervention and prevention.

Aims: To describe the pattern of echocardiographic abnormalities such as Ejection fraction, Left ventricular hypertrophy, systolic dysfunction, diastolic dysfunction, and fractional shortening in patients with CKD in university of Ilorin Teaching Hospital (UITH) Ilorin.

Methods: This is a retrospective study of 67 adults Patients with CKD managed at the renal unit of University of Ilorin Teaching Hospital. These were CKD patients who had Echocardiographic scanning between Feb, 2010 and February, 2013. The patients were tracked through the hard copy record of the echocardiographic procedures. The demographic data of the patients were collated and information on age, sex, causes of CKD, ejection fraction (EF), fractional shortening (FS), chamber dimensions and Echo diagnosis were collated. The data were analyzed by SPSS version 16 (SPSS Inc, Chicago, IL, USA).

Results: Sixty-Seven (67) patients had complete data and were analyzed. There were 31(46%) males with M:F of 0.85:1, and the mean age was 44+/-16.5years. The main causes of CKD were Hypertension 48%, glomerulonephritis 34%, and diabetes mellitus 7%. The mean EF was 51.3 +/- 21.0%; and FS 55(12.7-98)%. LVH was found in 66% of which 37% were eccentric type. Biventricular hypertrophy was found in 5%, diastolic dysfunction in 24%, while 7% had systolic dysfunction.

Conclusions: The commonest Echocardiographic abnormality in our patients is LVH as in which is a predictor of CV mortality. Routine screening of the patients is recommended to identify patients with the abnormality which may guide in the early administration of optimal treatments for CV protection.

19. NAN/CN/2015 – 10

THE RELATIONSHIP BETWEEN RENAL FUNCTION, VOLUME OVERLOAD AND CIRCULATING ENDOTOXAEMIA IN CKD PATIENTS

Muzamil Hassan, Raquel Duarte, Therese Dix-Peek, Sagren Naidoo, Saraladevi Naicker

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Background: Systemic inflammation is increasingly being recognized as an important predictor of cardiovascular morbidity and mortality in CKD patients; however, the source of this inflammatory response is yet to be fully elucidated. Fluid overload develop early in CKD patients, and was thought to be a potential

stimulus of endotoxaemia in CKD. This study therefore aimed to investigate association between renal function, volume overload and endotoxaemia across spectrum of South African CKD patients.

Methodology: The population consisted of 160 subjects comprising peritoneal dialysis (PD), haemodialysis (HD), stage 3 CKD patients, and age- and sex-matched controls (40 in each group). Fluid status was assessed using bio-impedance spectroscopy device while endotoxin levels were measured by Limulus Amebocyte Lysate (LAL) reagent kit. Estimated glomerular filtration rate (eGFR) was calculated in CKD stage 3 patients and controls using CKD-EPI formula. Data was analyzed using SPSS package.

Results: Volume overload and endotoxaemia was common across spectrum of CKD patients and was aggravated by worsening kidney function. In HD cohorts, post-dialysis endotoxin was higher among patients with dialysis-induced haemodynamic instability, and was also closely related to ultrafiltration volume. Endotoxin levels were higher in patients with fluid overload (0.59 ± 0.27 EU/ml) when compared with patients without volume overload (0.32 ± 0.15 EU/ml) ($p < 0.0001$). Endotoxins levels correlated with both absolute overhydration ($r = 0.513$, $p < 0.0001$) and OH/ECW% ($r = 0.490$, $p < 0.0001$).

Conclusion: CKD patients characteristically presented with significant endotoxaemia and overt volume overload, which increases with severity of renal dysfunction. Specifically, HD therapy may contribute to endotoxaemia in HD patients, through reduction of intestinal perfusion, predisposing to regional ischemia, ultimately resulting in bacteria translocation from the gut.

20. NAN/CN/2015 – 11

PREVALENCE AND RISKS FACTORS OF VOLUME OVERLOAD IN CKD PATIENTS: AN APPRAISAL OF BIO-IMPEDANCE SPECTROSCOPY AND INFERIOR VENA CAVA MEASUREMENTS

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Background: Fluid overload occurs early in chronic kidney disease (CKD); driving systemic inflammation, left ventricular hypertrophy (LVH) and atherosclerosis. This study is aimed to determine the prevalence and associated risks factors for volume overload in black South African CKD patients and also investigates the relationship between malnutrition, inflammation, cardiovascular disease and volume overload. The study also evaluated usefulness of (BIS), inferior vena cava diameter (IVCD) measurements in assessing volume overload.

Methodology: One hundred and sixty patients comprising haemodialysis (HD), peritoneal dialysis (PD), CKD stage 3 patients and controls (40 in each group) were studied. Bio-impedance spectroscopy (BIS) analysis was done using body composition monitor to assess fluid and nutritional status. Echocardiographic studies were done for the presence of LVH, measurement of inferior vena cava diameter (IVCD) and carotid intima media thickness (CIMT). Serum interleukin-6 (IL-6) levels were also measured. Data was analyzed using SPSS package (version 16).

Results: Volume overload was common across spectrum of CKD patients and was aggravated by worsening kidney function. Receiver operating concentration (ROC) curves analysis showed area under concentration curve (AUC) for IVCD, collapsibility index and edema (by physical examination) of 0.663 (sensitivity 0.581,

specificity 0.624, $p=0.002$), 0.662 (sensitivity 0.372, specificity 0.821, $p=0.002$) and 0.740 (sensitivity 0.814, specificity 0.667, $p<0.0001$) respectively. Nutritional markers, inflammation, atherosclerosis and LVH were closely associated with volume parameters. On multivariate analysis, IL-6, fat tissue index (FTI), CIMT and left atrial dimension (LAD) were identified as independent determinants of volume overload.

Conclusion: Volume overload was associated with malnutrition, inflammation, LVMI and LAD in black South African CKD patients. BIS and IVCD are useful tools in the assessment of hydration status in CKD patients. However technical and time-based limitations should be considered in IVCD measurements.

21. NAN/CN/2015 – 12

CIRCULATING ENDOTOXIN IS RELATED TO SYSTEMIC INFLAMMATION AND ATHEROSCLEROSIS IN SOUTH AFRICAN CKD PATIENTS

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Background: Cardiovascular disease (CVD) is the most common cause of death among CKD patients worldwide. Systemic inflammation plays a major role in the development of atherosclerosis among CKD patients. The source of the inflammatory responses and the mechanisms by which inflammation leads to CVD remain to be established. This study aimed to determine the role of circulating endotoxaemia as a possible risk factor for atherosclerosis in CKD patients.

Methodology: Endotoxin, interleukin-6, haemoglobin concentration, albumin, cholesterol, calcium, phosphate and parathyroid hormone levels were measured in 160 patients comprising 40 each of haemodialysis (HD), peritoneal dialysis (PD), CKD stage 3 and controls. Nutritional status was assessed using a bio-impedance spectroscopy - body composition monitor. Carotid intima media thickness (CIMT) was also measured. Data was analyzed using SPSS package (version 16).

Results: Endotoxin concentration was significantly higher among patients on PD (0.59 ± 0.25 EU/ml), HD (0.54 ± 0.34 EU/ml) and CKD (0.50 ± 0.22 EU/ml) compared to controls (0.34 ± 0.14 EU/ml); $p<0.001$. Endotoxin levels inversely correlated with nutritional indices [fat tissue index ($r=-0.229$, $p=0.012$), fat tissue mass ($r=-0.209$, $p=0.022$) and adipose tissue mass ($r=-0.190$, $p=0.037$)]. CIMT was significantly higher among CKD patients compared to the controls. Endotoxin level had a significant correlation with serum interleukin-6 ($r=0.283$, $p<0.0001$) and CIMT ($r=0.318$, $p<0.0001$). CIMT positively correlated with mean arterial blood pressure ($r=0.257$, $p=0.001$), calcium-phosphate product ($r=0.255$; $p=0.001$) and negatively correlated with haemoglobin ($r=-0.306$, $p<0.0001$) and albumin ($r=-0.278$, $p<0.0001$). Multiple linear regression analysis showed that endotoxin level was the only independent risk factor associated with increased CIMT.

Conclusion: The findings suggest that endotoxaemia was common in CKD subjects, and the degree of circulating endotoxaemia was related to severity of systemic inflammation and atherosclerosis. Possibly endotoxaemia may be part and parcel of the so-called “malnutrition-inflammation-atherosclerosis syndrome” in CKD patients.

22. NAN/CN/2015 – 13

ROLE OF THERAPEUTIC PLASMA EXCHANGE IN THE MANAGEMENT OF ANTISYNTHEASE SYNDROME

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Antisynthetase syndrome (ASS) is a rare condition characterized by condition characterized by interstitial lung disease (ILD), inflammatory myositis, fever, Raynaud phenomenon, and inflammatory polyarthritis in the setting of antibodies to aminoacyl- transfer RNA synthetases, with anti- Jo-1 antibody being the most common. Outcome is not promising, especially when associated with interstitial lung disease, ILD and prognosis is said to be dependent on the severity, type of lung injury and clinical course of the lung disease. Once there is lung involvement, treatment has to be more aggressive and effective, if not, fibrosis shows a rapid progression. To date, treatment of ILD associated with ASS is not standardized. Current therapy is based on the use of steroids alone or in combination with other immunosuppressive agents especially in severe or steroid refractory cases. The role of therapeutic plasma exchange in the management of this rare condition is yet to be established. Only one case report has looked into therapeutic plasma exchange (TPE) and double filtration plasmapheresis as an emergency intervention in a refractory case.

We report a case of steroid refractory ASS with progressive ILD and severe respiratory failure in a 41 year woman. At presentation, she was in severe respiratory failure; hypoxic (oxygen saturation at room air was 85%) and hypoxemic (PO₂ - 41.3mmHg). She was positive for antinuclear antibody, her anti-Jo-1 antibody was >8.0AI (reference <1.0AI) and creatinine kinase, CK level was 389U/L (reference range 30-170U/L). She was commenced on IV methylprednisolone 125mg q6h but failed to demonstrate clinical and laboratory response after 6 days of steroid therapy. Her anti Jo1 antibody was persistently >8AI and CK rose to 875 U/L from 389U/L.

Because of the aggressive and deteriorating clinical course requiring maximal respiratory support, failure of steroid therapy and continued high concentration of anti Jo1 antibody and CK, a decision was made to add TPE to her treatment.

Method: She was scheduled for 5 sessions of TPE. Plasma exchange was performed with a centrifuge based apheresis system, Spectra Optia Apheresis system version V9. Each treatment consisted of a 2.5 liters of plasma exchange with 5% albumin. We obtained samples for anti-jo1 antibody in the patient's serum pre and post each treatment and also in the discarded plasma (effluent)

Result: At the end of the 4th session of plasma exchange, the anti Jo 1 antibody levels dropped to 4.6AI from >8AI

Conclusion: TPE rapidly removed the anti Jo- 1 antibodies with overall improvement in her clinical and laboratory findings.

Acknowledgement: This work was previously submitted to American Society for Apheresis ASFA in November 2014 and is expected to be presented at the 2015 ASFA annual meeting in May 2015 if accepted.

Funding: ISN

23. NAN/CN/2015 – 14
**PREVALENCE AND PATTERNS OF CYSTIC KIDNEY DISEASES —
THE LASUTH EXPERIENCE**

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Nigeria.*

ABSTRACT

Background; Cystic kidney diseases are an important cause of Chronic Kidney Disease, contributing about 10% to the burden of End Stage Renal Disease. The prevalence of different types of renal cysts tends to vary with age with simple renal cysts and autosomal dominant polycystic kidney disease having a higher prevalence with increasing age. Studies on cystic diseases of the kidneys are however sparse in our environment.

Objective: To determine the prevalence of cystic kidney diseases seen over a six year period in LASUTH and describe the patterns seen.

Methodology: Retrospective crosssectional study involving all patients with cystic kidney diseases seen at the medical outpatient department between October 2008 and October 2014. Data, were obtained from the record books and patients casefiles. Data collected included, patients age, gender, type of cyst, presentation, complications. Diagnosis was made by abdominal ultrasonography and or computerised tomography scan.

Results: A total of 37 out of 1524 patients seen during the period had renal cystic disease (2.4%). Age range was 14-76years with a mean of 45.2 years. A slight female preponderance was noted with a male : female ratio of 1: 1.2. The types of cysts seen were: Autosomal Dominant Polycystic Kidney Disease (48.6%), simple cysts (45.9%) , and single cases of multicystic dysplastic and medullary cystic disease. The most common presentation was abdominal pain (48.6%), followed by incidental finding (32.4%) , Hypertension (27%) and Renal failure (19%). 5% presented with abdominal mass, while 2.7% presented with haematuria.

Conclusion: Cystic kidney diseases, though constituted only a small proportion of patients seen during the study period, is still an important cause of morbidity in patients attending our renal clinic. A high index of suspicion is needed for diagnosis.

SCIENTIFIC SESSION 2B – Queen Esther HALL 16:00 – 17:00 (TUESDAY 27TH JANUARY 2015)

24. NAN/AK/2015 - 01
**HAEMODIALYSIS FOR PAEDIATRIC ACUTE KIDNEY INJURY IN A TERTIARY
HOSPITAL IN SOUTH WEST NIGERIA**

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Objective: Acute kidney injury (AKI) is a potentially preventable cause of mortality in sub Saharan Africa and may require treatment with haemodialysis. There are, however, few reports on paediatric haemodialysis for AKI in the sub region. We therefore performed a preliminary review of paediatric haemodialysis for AKI in our centre in terms of aetiology, indications for dialysis, and outcomes.

Methodology: A retrospective review of case records of patients managed by the paediatric nephrology unit who underwent haemodialysis for AKI from January 2004 to September 2014. Record was available for one patient in 2004 while the other patients were seen between 2006 and 2014.

Results: 58 children, aged 3-16 (9.0 ± 3.3) years, 56.9% (n=33) males, were studied. The primary aetiology of AKI was massive intravascular haemolysis (IVH) in 20 patients (34.5%), septicaemia in 18 patients (31.0%), Glomerulonephritis was the cause of AKI in 10 patients (17.5%), while Malaria was the cause of AKI in 8 patients (31.8%) including 5 of the patients with IVH. AKI was secondary to malignancy in 4 patients including 1 of the patients with septicaemia. 3 patients had other causes of AKI. The number of sessions of dialysis ranged from 1 to 10 sessions per patient with a modal value of 2 sessions. Overall mortality was 27.6% (n=16) and was related to the aetiology of AKI. There were no deaths among patients with IVH or malaria. There were 7 deaths among patients with septicaemia (38.9%) and 5 deaths (50%) among the patients with glomerulonephritis, while all the patients with malignancies died.

Conclusion: Intermittent haemodialysis can be successfully carried out in children with AKI in Nigeria, and should be promoted. The outcome is related to the underlying cause of AKI.

25. NAN/AK/2015 - 02

KNOWLEDGE OF ACUTE KIDNEY INJURY AMONG DOCTORS ATTENDING A CONTINUING MEDICAL EDUCATION PROGRAMME AT KIDNEY CARE CENTRE, ONDO

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Introduction: AKI is a potentially reversible disease that is associated with high mortality if not diagnosed and managed early. One of the major ways of reducing the global burden of AKI is prevention, early diagnosis and treatment. Adequate knowledge of AKI by health care provider is key in the prevention and management of AKI.

Methods: The study was conducted using a self-administered questionnaire among doctors who attended a continuing medical education programme at Kidney care centre with the objective of assessing their knowledge of AKI. A scoring method was developed to assess knowledge.

Results: A total of seventy four doctors comprising of 57 males and 17 females participated in the study. The mean age of the participants was 30.67 ± 6.29 years. Sixty-one were less than 5 years post MBBS, while 13 were 5 years and above post MBBS. Only 15 (20.3%) had received lecture on AKI post qualification. Fifty-four (73%) of the participant could define AKI, 47(63.5%) categorized AKI, 21(28.4%) stated five risk factors for AKI, 41(55.4%) stated the two criteria for classifying AKI, 53(71.6%) mentioned important examinations in AKI, only 17(23%) mentioned three common nephrotoxic drugs while 37(50%) stated three indications in AKI for referral to a nephrologist. Thirty-two (43.2%) had good overall knowledge, 34(46%) had some knowledge while remaining 8(10.8%) had poor knowledge.

There was no association between knowledge of AKI and number of years post MBBS.

Conclusion: The knowledge of AKI among the doctors assessed was not adequate. AKI lectures should be incorporated into CME lectures for doctors to improve their knowledge.

26. NAN/AK/2015 - 03

AETIOLOGY AND OUTCOME OF PATIENTS PRESENTING WITH ACUTE KIDNEY INJURY AT A NEW RENAL CARE CENTRE IN ONDO TOWN OVER A 10-MONTH PERIOD

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Introduction: There is still paucity of information on the prevalence, aetiology and outcome of AKI in Nigeria. These information will be helpful in planning preventive care, formulating health policies and seeking support that will help to reduce the burden of this disease. The aim of this study was to identify the common aetiologies of AKI and outcome of patients presenting with AKI in Kidney Care Centre, Ondo.

Methodology: This was a retrospective study where case notes of patients who were managed for AKI between March 2014 to December 2014 in Kidney Care Centre were reviewed.

Results: A total of 35 patients comprising of 17 males and 18 females (M:F, 1:1.1) were managed for AKI during this period. The mean age of these patients was 47.74 years. The median estimated GFR at presentation was 15.47 ml/min/1.73m². Twenty five(71.5%) of these patients presented in RIFLE stage 3. The commonest cause of AKI in these patients was sepsis; accounting for 57.1%. Other common aetiologies were eclampsia in 4(11.4%), haemorrhage in 3(8.6%) and hypovolaemia in 3(8.6%). Medical, obstetric/gynaecological and surgical causes of AKI were seen in 22(62.9%), 11(31.4%) and 2(5.7%) respectively.

A total of 17(48.6%) had haemodialysis. Twenty-two (62.9%) recovered fully from AKI, ten (28.6%) died, two(5.7%) were referred and 1 discharged against medical advice.

Conclusion: Sepsis, eclampsia, haemorrhage and hypovolaemia were the common causes of AKI at KCC. The mortality is still high compared to vision 0 by 25. We recommend that a renal registry be opened for AKI in Nigeria.

27. NAN/AK/2015 - 04

ACUTE KIDNEY INJURY (AKI) OUTCOME, A PREDICTOR OF LONG-TERM MAJOR ADVERSE CARDIOVASCULAR EVENTS (MACE)

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Background: The incidence of AKI in hospitalized patients is increasing. Many of these patients survive the immediate acute AKI period and may be prone to develop long term outcomes of AKI. This study aims to determine if complete recovery of renal function after AKI is associated with lower risk of MACE.

Methods: The study is a cohort of adults admitted into the University Of Virginia Medical Center between January 1, 2002 and December 31, 2012 and developed AKI while on admission. They were followed up through Dec 31 2013. AKI is defined as an increase in serum creatinine (Scr) by ≥ 0.3 mg/dl from the baseline and or requirement for acute dialysis during the index hospitalization. Complete recovery is defined as a return of serum creatinine level to less than 1.25 times the baseline value.

Outcome measurement: MACE is defined as subsequent admission for Myocardial Infarction (MI), Transient Ischemic Attack (TIA), stroke and heart failure using ICD 9 codes. The date of MACE is defined as the date of the first qualifying event.

Results: Overall, 19.57% of the participants n=24,631 had AKI, (10.96% had AKI, 8.6 had AKI on a background CKD). 11538 survived 90 days of AKI and available for analysis. Mean age and baseline eGFR were 56.79 ± 15.79 years and 87.48 ± 17.34 ml/min/1.73m² respectively. Of the 9,637 survivors of AKI in whom recovery could be assessed, 7170 (74.4%) recovered to within 25% of their baseline serum Creatinine.

Major adverse cardiovascular event occurred in 27.28% of patients over a median follow up period of 399 days. Predictors of MACE following AKI identified were increasing age, male sex, African Americans, smoking, and prior history of hypertension, incomplete recovery of renal function and high charlson co morbidity score index. Complete renal recovery and higher baseline eGFR were associated with lower risk of MACE (Adjusted Odds ratio 95% CI, 0.705(0.635, 0.782) and 0.987(0.984, 0.990) respectively.

Conclusion: Complete renal recovery after an episode of AKI in patients with normal baseline Kidney function is associated with a lower risk of long term major adverse cardiovascular events when compared with those who did not fully recover.

Acknowledgement: This work was previously submitted to World Congress of Nephrology (WCN) in October 2014 and is expected to be presented at the 2015 WCN biennial meeting in March 2015.

Funding: ISN

28. NAN/AK/2015 - 05

ACUTE KIDNEY INJURY IN HOSPITALIZED PATIENTS IN A TERTIARY CENTRE: AN AETIOLOGICAL AND OUTCOME STUDY.

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Introduction: The burden of Acute Kidney injury in developing countries especially in Sub-Saharan Africa is enormous. The morbidity and mortality appears to be rising despite the availability of dialytic therapy in some parts of Africa.

Objectives: To determine the causes and the outcome of acute kidney injury in hospitalized patients in UCTH, Calabar.

Methodology: This was a prospective study of patients with acute kidney injury admitted in UCTH, Calabar over 10 month period from January 2014 to November 2014. Data was analysed using SPSS version 19.

Results: A total of 42 patients were recruited for the study over a period of 10 months. Eighteen (42.9%) of the participants were males while 24 (57.1%) were females. Age ranged from 11 to 81 years with a mean age of 44.2 ± 17.32 years. The common causes of AKI were septicaemia 20 (47.6%), malignant phase hypertension 7 (16.7%), hypovolaemia 4 (9.5%) and other causes accounted for the remaining 11 (26.1%). Thirty one (73.8%) had co-morbidity and hypertension 12 (38.7%) was the commonest co-morbid condition. Majority of the patients 26 (61.9%) were managed in the medical wards while 7 (16.7%) were managed in the intensive care unit (ICU). Moreso, 27 (64.3%) of the patients needed dialytic intervention but only 9

(21.4%) of these patients received dialysis. The study outcome revealed that 27 (64.3%) of the patients were discharged home, 13 (31.0%) died while 2 (4.8%) left against medical advice (LAMA).

Conclusion: Septicaemia and malignant phase hypertension are the commonest causes of AKI in our environment and are associated with high mortality. We therefore advocate the need for prompt and adequate treatment of infection and control of blood pressure with subsequent early referral to the nephrologist.

29. NAN/EP/2015 – 01

CHRONIC KIDNEY DISEASE IN SCHOOL CHILDREN IN ILE- IFE, NIGERIA.

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Introduction: The burden of chronic kidney disease (CKD) in school children in Ile-Ife, Nigeria is unknown; this has, therefore, made healthcare planning for children with this condition difficult. Persistent proteinuria is an important risk factor for irreversible loss of kidney function and development of CKD if not detected and treated early. Aim: To determine CKD prevalence in school children in Ile Ife, Nigeria, using persistent significant proteinuria (PSP) of at least 3 months duration as a marker.

Methods: Six hundred and forty (48.5%) male and 687 (51.5%) female pupils (n=1335) aged 6-14 years were randomly selected from primary schools in Ile Ife, Nigeria. They were screened monthly with dipsticks for PSP (e⁺ 1+ or e⁺30 mg/dL proteinuria) using freshly voided urine samples for three consecutive months. Pupils confirmed with PSP were referred for further evaluation, including renal ultrasound and eGFR assessment, and treatment in our unit.

Results: Six of 1335 (0.45% or 450/100 000) pupils aged 10-13 years had PSP (30-100 mg/dL). Three had CKD-1 (eGFR > 90ml/min/1.73m²) while two had CKD-2 (eGFR 60-89 ml/min/1.73m²). The sixth pupil refused further evaluation. Renal ultra sound revealed bilaterally shrunken kidneys with preserved corticomedullary differentiation in three of five pupils that were further evaluated.

Conclusion: The low prevalence of CKD (0.45%), as determined by PSP alone, may not reflect the true burden of CKD in our community. Some CKD cases were possibly missed because not all pupils were subjected to renal ultrasound and serum creatinine assessments. A larger study using the triple assessment method that involves urinalysis for PSP, renal ultrasound, and eGFR determination is warranted.

SCIENTIFIC SESSION 3A – King David HALL 11:00 – 13:00 (WEDNESDAY 28TH JANUARY 2015)

30. NAN/EP/2015 – 02

THE CHANGING TREND IN THE EPIDEMIOLOGY OF CHRONIC KIDNEY DISEASE IN NIGERIA: EXPERIENCE FROM UNIVERSITY OF BENIN TEACHING HOSPITAL

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Background: Chronic kidney disease (CKD) has assumed pandemic proportions; common causes include hypertension, chronic glomerulonephritis (CGN) and diabetes mellitus (DM). With advancement/improvement in the management of common causes of CKD, epidemiologic transitions may be setting in.

Aim: To review the aetiologies and pattern of presentation of patients with CKD seen over a 6-year period in a tertiary hospital in Nigeria.

Method: A retrospective review of case records from August 2009 to August 2014. Socio-demographic data, characteristics, history, clinical findings, diagnosis and investigative findings at presentation were collated.

Results: 1,367 patients with CKD attended the Centre during the study period; 942 patients, made up of 55% males and 45% females (1.2:1 male: female ratio) had complete data. CKD accounted for 9.9% of hospital medical attendance, affecting more of the 40-59 years age group. Most common complaint was general body weakness in 65.3% of patients, other symptoms were uremia-related in 58.4%, dyspnoea in 54.5% of patients. Median systolic and diastolic blood pressure was 160mmHg and 90mmHg respectively. Common causes of CKD were hypertension (24.3%), CGN (21.1%), DM (19.2%) and HIV (17.4%). There was a progressive increase in the prevalence of HIV-related kidney disease, emerging as the 3rd leading cause of CKD from 2012 to 2014. Majority of the patients (72.9%) presented in end-stage renal disease with uraemia and of these, 72.4% had at least 2 sessions of haemodialysis while 0.6% had kidney transplantation.

Conclusion: Chronic kidney disease was more prevalent in the middle age group. HIV-related kidney disease is emerging and ranking as a common aetiology of CKD in our environment. There was a progressive increase in number of patients with CKD seen over the years reviewed compared to previous reports. This may be a reflection of increased awareness, increase in availability of facilities for management of CKD and some of its causes.

31. NAN/EP/2015 – 03

PREVALENCE AND PATTERN OF CARDIOVASCULAR DISEASE IN CHRONIC KIDNEY DISEASE PATIENTS

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Introduction: The magnitude of the problem of chronic kidney disease (CKD) is enormous, and the prevalence is increasing globally at an exponential rate. Cardiovascular disease (CVD) is the leading cause

of morbidity and mortality in patients at every stage of chronic kidney disease.

Objective: This study sought to determine the prevalence and pattern of cardiovascular disease and its predictive factors among patients with CKD in a developing country.

Methodology: It was a cross-sectional study that involved 50 patients with stages 2 to 4 CKD, and 50 age and sex matched apparently normal individuals without any known medical illness as controls. Their socio demographic and clinical parameters were assessed using a proforma. Blood investigations were done to establish their renal function status and to assess risk factors for CVD. They had electrocardiogram to assess arrhythmias and to establish the presence of left ventricular hypertrophy. Echocardiography was performed using two-dimensional, M-mode, conventional Doppler as well as tissue Doppler imaging to assess cardiac structure and function. Ankle brachial index and carotid intima media thickness were also assessed using the hand held Doppler and carotid ultrasound machine.

Results: Carotid intima media thickness (CIMT) was significantly increased in CKD patients compared with the control group with mean values being 1.1 ± 0.38 mm and 1.1 ± 0.43 mm on the right and left sides in the CKD patients respectively compared with 0.70 ± 0.10 mm and 0.70 ± 0.11 mm on the right and left sides in the control group, $p < 0.001$. Eighty four percent of the CKD patients compared with 18% of the control group ($\chi^2 = 43.6$, $p < 0.001$) had thickened CIMT while 22% of the CKD patients compared with 6% of their control group ($\chi^2 = 10.3$, $p = 0.006$) had peripheral arterial disease as determined by ankle brachial index (ABI) < 0.9 . When both clinical and laboratory findings were considered, cardiovascular disease was found in 96% of the CKD group compared with 36% of the control group, ($\chi^2 = 34.08$, $p < 0.001$). Increasing BMI was found to predict cardiovascular disease in CKD patients studied.

Conclusion: Patients with CKD are at increased risk of cardiovascular disease which is the leading cause of morbidity in them. Surrogate measures will improve risk assessment in CKD patients. Findings from this study emphasize the need for early assessment of cardiovascular disease in CKD patients especially in developing countries, with the aim of intervening early to prevent cardiovascular disease and hence, retard the progression of kidney disease in this group of patients.

32. NAN/EP/2015 – 04

PREVALENCE OF HYPERTENSION AND HYPERTENSION-ASSOCIATED INCREASED GLOMERULAR PERMEABILITY IN SCHOOL CHILDREN.

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Introduction: Long standing hypertension is a risk factor for kidney damage and increased glomerular permeability. This study is to determine the prevalence of hypertension-associated increased glomerular permeability (HIGP) in primary school children.

Methodology: 1,335 pupils aged 6-14 years were randomly recruited from twelve primary schools in the two Local Government Areas of Ile-Ife. Female pupils accounted for 51.5% (n=687) of all subjects. Blood pressure (BP) measurements were performed in accordance with the international task force report on high BP in children and adolescents. Presence of proteinuria and/ or haematuria for at least 3 months, determined by dipstick, was used as a marker of HIGP.

Results: Thirty-three of 1335 (2.5%) pupils aged 10.0 ± 2.4 (6.0-14.0) years were hypertensive with mean systolic/diastolic BP of $125.6 \pm 6.5/81.7 \pm 3.3$ mmHg (114.0-140.0/80.0-90.0; $>95^{\text{th}}$ to $>99^{\text{th}}$ / $>95^{\text{th}}$ to 99^{th}

percentile). Nine (27.3%) had combined systolic and diastolic hypertension with a mean of $126.7 \pm 5.7/80.0-80.0 \pm 0.0$ mmHg (120.0-130.0/80.0-80.0; $>95^{\text{th}}$ to $>99^{\text{th}}$ / $>99^{\text{th}}$ percentile). Fourteen (42.4%) had isolated systolic hypertension with a mean BP of 125.4 ± 6.7 mmHg (114.0-140.0; $>95^{\text{th}}$ to $>99^{\text{th}}$ percentile) while 10 (30.3%) had isolated diastolic hypertension with a mean of 82.0 ± 3.5 mmHg (80.0-90.0; 95^{th} to $>99^{\text{th}}$ percentile). Twenty (61.0%) had stage-1 hypertension; their mean systolic BP (SBP) was 121.1 ± 4.5 mmHg (114.0-130.0; 95^{th} to $<99^{\text{th}}$ percentile). Mean diastolic BP (DBP) was 80.5 ± 1.2 mmHg (80.0-84.0 mmHg; 95^{th} to $<99^{\text{th}}$ percentile). Thirteen (39.0%) had stage-2 hypertension; mean SBP was 131.0 ± 3.3 mmHg (130.0-140.0 mmHg; 99^{th} to $>99^{\text{th}}$ percentile). Mean DBP was 86.5 ± 4.43 mmHg (80-90 mmHg; 99^{th} to $>99^{\text{th}}$ percentile). None had urinalysis evidence of proteinuria and/ or haematuria by dipstick.

Conclusion: The prevalence of hypertension among the pupils was 2.5%. That none of the hypertensive pupils had evidence of HIGP could mean that the hypertension was, probably, not long standing at the time of study.

33. NAN/EP/2015 – 05

CKD RISK FACTORS: AN URBAN - RURAL COMPARISON IN AKWA IBOM, SOUTH-SOUTH NIGERIA

Akpan EE, Ekrikpo UE, Udo AIA, Bassey B.

Introduction: There is a current mismatch in allocation of health resources with a predominantly urban location of most health facilities, including renal centres while CKD prevalence (and its risk factors) is increasing in the developing world. We aimed to identify the difference (if any) in the prevalence of CKD risk factors between urban and rural communities of South-South Nigeria.

Subjects and Method: A cross sectional study of two urban and 2 rural cities randomly selected from the three senatorial districts that make up Akwa Ibom state. Consented participants had their socio-demographic data, medical and family history of hypertension, diabetes and renal disease obtained. Anthropometric parameters and blood pressure were also measured and urinalysis performed. Random plasma glucose was checked using glucose meter. Diabetes was defined based on previous history of diabetes on drugs or random plasma glucose of ≥ 11.1 mmol/l while hypertension was defined using the JNCVII classification.

Results: Nine hundred and seventy eight participants were recruited from rural areas and five hundred and ninety from urban centers. There was no significant difference in gender proportion, proteinuria or diabetic prevalence in both cohorts. The rural populace were significantly older than the urban (43.9 ± 16.6 vs. 39.9 ± 11.9 , $P < 0.001$). The BMI of the urban populace was significantly higher than of the rural dwellers ($p < 0.001$). Waist circumference was significantly higher in urban populace than the rural population (89.8 ± 13.3 vs 79 ± 11.3 , $p < 0.001$). The urban populace had 10.6% of them who had been diagnosed hypertensive before the study compared to 6.4% of the rural populace ($p = 0.008$). The rural populace had higher systolic, diastolic and mean arterial blood pressure than the urban populace ($p < 0.001$, 0.002 , < 0.001 respectively). The prevalence of hypertension was significantly higher in the rural populace than the urban populace [44.3% (95%CI 41.1 – 47.4%) versus 28.6% (95% CI 24.9 – 32.3%)]. Multivariate linear regression showed no difference in the risk of increasing mean arterial blood pressure in the rural compared to the urban cohort (p – value 0.25) but age, male gender, history of Diabetes mellitus, presence of proteinuria, increasing BMI, increasing waist circumference were associated with increasing mean arterial blood pressure.

Conclusion: Our findings highlights that there is an epidemiologic transition in CKD risk factors in our communities. Hence, the need to intensify and extend CKD preventive measures to our rural communities.

34. NAN/AK/2015 - 05

DIALYSIS REQUIREMENT AND LONG-TERM MAJOR ADVERSE CARDIOVASCULAR EVENTS (MACE) IN HOSPITAL ACQUIRED ACUTE KIDNEY INJURY (AKI) – A PROPENSITY-MATCHED COHORT STUDY

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Background: AKI is common in hospitalized patients. Many patients survive the immediate post AKI period, thus likely to suffer long-term sequelae of AKI. It remains unclear whether the need for temporary dialysis intervention following AKI in subgroup of patients with baseline estimated GFR ≤ 60 ml/min per 1.73m^2 has effect on the long-term MACE outcomes.

Methods: The study cohort comprises of adults admitted to the University of Virginia Medical Center between January 1, 2002 and December 31, 2012 who developed AKI during hospitalization and survived beyond 30 days of AKI. Follow up was done until MACE or through Dec 31, 2013 (n= 11,779). Of these 253 received temporary dialysis. AKI was defined as an absolute increase in serum creatinine by ≥ 0.3 mg/dl from the baseline occurring within 48 hrs and or requirement for acute dialysis during the index hospitalization. MACE is defined as subsequent admission for Myocardial Infarction (MI), cerebrovascular disease (CVD) and heart failure using ICD 9 codes. The date of MACE is defined as the date of the first qualifying event. Demographic and premorbid clinical variables were used to generate propensity score. Patients who had temporary dialysis were matched to those managed conservatively according to propensity score in a ratio of 1:3

Results: After the propensity score matching, covariates were well balanced between groups. The overall hazard ratio for MACE in dialyzed versus non dialyzed patients was 1.173 (95% CI: 0.920 to 1.495).

Conclusion: Treatment of AKI with temporary dialysis in hospitalized patients with baseline eGFR of ≤ 60 ml/min per 1.73m^2 was NOT associated with an increased risk for subsequent admission for MACE. Clinicians may not need to worry that the dialysis procedure itself may confer additional risk for long-term MACE in AKI patients with normal pre-hospitalization GFR

Acknowledgement: This work was previously submitted to National Kidney foundation NKF in December 2014 and is expected to be presented at the 2015 NKF spring clinical meeting in March 2015 if accepted.

Funding: ISN

SCIENTIFIC SESSION 3B – Queen Esther HALL 11:00 – 13:00 (WEDNESDAY 28TH JANUARY 2015)

35. NAN/EP/2015 – 06

COMMUNITY SCREENING FOR RISK FACTORS AND MARKERS OF CHRONIC KIDNEY DISEASE IN ONDO STATE

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Introduction: Chronic kidney disease has become a global epidemic with a variable prevalence rate of about 20.4-26.6% in Nigeria. It is a relentless loss of kidney structure and function regardless of therapeutic intervention hence the need for early detection of risk factors and markers.

Objectives: To determine the prevalence of risk factors for Chronic Kidney Disease and its markers.

Methodology: A cross-sectional study of consecutive adults who presented for screening at a community screening exercise in two local governments in Ondo State; Ondo Central and Akure South. Their bio-data, medical history, biophysical profiles and spot urinalysis were obtained.

Data was analysed using SPSS 20.

Results: A total of 993 adults (age range: 17-120 years) were screened. There were 65.9% males and 34.1% females (M:F=1.9:1). Their mean age was 47.13 ± 17.20 years. Their mean SBP and DBP were 131.1 ± 24.4 mmHg and 80.3 ± 14.2 mmHg respectively. Three hundred and ten (31.5%) had blood pressure (BP) in the pre-hypertension range according to JNC 7 while 447 (45.4%) had BP in the hypertension range. Forty five (6.5%) had a previous history of diabetes mellitus and 32 (4.3%) had history of cigarette smoking. The mean BMI was 26.6 ± 5.8 kg/m² while the waist circumference (WC) for males and females were 85.9 ± 11.9 cm and 89.6 ± 13.5 cm respectively. 24.7% of the males had WC above 94cm; WC was above 80cm in 72.4% of the females. Proteinuria ranging from 1+ to 3+ was found in 124 (12.8%); 1.5% had haematuria.

There was significant association between gender and hypertension ($p < 0.001$). BMI correlated with SBP ($p < 0.001$, $r^2 = 0.355$) and DBP ($p < 0.001$, $r^2 = 0.381$).

Conclusion: It is concluded that the risk factors for CKD is common among indigenes and residents of Ondo State.

36. NAN/EP/2015 – 07

PREVALENCE OF CKD AND ITS CLINICAL CORRELATES IN TYPE 2 DM PATIENTS ATTENDING LAUTECH TEACHING HOSPITAL, OGBOMOSO

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Introduction: CKD is an emerging global health challenge and diabetes mellitus is a well-established cause. Early diagnosis, institution of appropriate treatment as well as paying attention to associated clinical factors will slow down the progression to End Stage Renal Disease (ESRD). Hence, this study was aimed at determining prevalence of impaired kidney function and its clinical correlates in type 2 DM patients attending LAUTECH Teaching Hospital, Ogbomoso.

Methodology: This was a descriptive cross-sectional study involving 92 patients with type 2 diabetes mellitus. Anthropometric parameters were taken as well as blood samples for biochemical analysis. Fasting blood sugar (FBS), blood pressure (BP), serum creatinine, fasting lipid profile and BMI of the patients were estimated and calculated accordingly. Estimated GFR (eGFR) was calculated using the MDRD formula. Hypertension was defined as BP > 130/80 mmHg while dyslipidaemia was defined by adopting the NCEP(ATPIII) guidelines. CKD was defined as the presence of persistent proteinuria on dipstick for 3 months and/or eGFR < 60 mls/min. The data were analyzed using SPSS (version 16).

Results: A total of 92 patients with type 2 diabetes (46 males and 46 females) were recruited for the study. The mean age was 62.54 years. The prevalence of Neuropathy, Hypertension, Dyslipidaemia, Obesity, Macroalbuminuria and microalbuminuria in the study population were 69.6%, 80.4%, 78.3%, 23.9%, 43.5%, 39.1% respectively. The prevalence of CKD was 43.5%. Using KDOQI staging, 6.5% of patients had CKD stage 1, 50.0% had CKD stage 2, 43.5% had CKD stage 3, while none had CKD stage 4 and stage 5 respectively. There were no significant difference between the prevalence of Hypertension, Dyslipidaemia, Obesity and microalbuminuria between the patients with CKD and non -CKD groups.

Conclusion: There is high prevalence of CKD as well as its modifiable risk factors for progression among patients with type 2 diabetes mellitus.

37. NAN/EP/2015 – 08

COMPARISON OF THREE CREATININE-BASED PREDICTION EQUATIONS FOR ESTIMATION OF GFR IN ADULT NIGERIANS.

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Background: The prevalence of chronic kidney disease is on the increase globally with attendant increasing burden. Early diagnosis is therefore essential in order to identify subjects at risk. Estimation of GFR is one of the most reliable means of identifying persons at risk of CKD. The aim of this study was to compare the e-GFR using 3 creatinine-based prediction equations in an unselected adult population.

Method: The study included 259 volunteers who participated in the screening exercise during the World Kidney day 2014. Demographic and anthropometric data were obtained and blood samples collected for assessment of serum creatinine. GFR was estimated using Cockcroft-Gault, 4-variable MDRD and the CKD-EPI equations.

Results: The mean age of participants was 28.3 ± 9.7 years (16 to 66 years). Males constituted 52.1% while 47.9% were females. Females had significantly lower mean e-GFR than males using the Cockcroft-Gault and the 4-variable MDRD formulae ($p=0.00$ and 0.01 respectively), while there was no statistically significant gender difference with the CKD-EPI equation. The results obtained from the 3 equations were highly correlated ($p < 0.001$). Frequency of $eGFR < 60 \text{mls/min/1.73m}^2$ was 5(2.0%), 2(0.8%) and 1(0.4%) by Cockcroft-Gault, MDRD and CKD-EPI equations respectively. The whole population showed better renal function when evaluated with the CKD-EPI equation compared to the other equations.

Conclusion: The prediction equation used to estimate GFR may have an impact when classifying patients into various stages of renal function. Further studies in different risk populations are therefore needed for better interpretation of values.

Keywords: *Estimated GFR, Equations, CKD*

38. NAN/EP/2015 – 09

PREVALENCE OF RISK FACTORS FOR CKD AMONG CIVIL SERVANTS IN ILORIN

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Background: The prevalence of CKD is growing and the cost of management is highly prohibitive which constitute a threat to the economy of many countries particularly in sub-Saharan Africa. One of the preventive strategies is screening for its risk factors to facilitate targeted intervention. **Aims:** The study was designed to determine the prevalence of some risk factors for CKD such as high blood pressure (HBP), smoking, obesity, analgesic abuse among groups of civil servants in Ilorin city. **Methods:** This is cross sectional study of 410 adult civil servants in the federal secretariat and the administrative section of the University of Teaching Hospital. The demographic data of the participants were collated, and information on HBP, diabetes, family history of CKD, obesity, smoking, and analgesic abuse were extracted. The blood pressure, Weight, Height, Waist circumference, and Hip circumference, were measured following the standard protocol. The data were analysed by SPSS version 20 (SPSS Inc, Chicago, IL, USA). **Results:** 352 completed the study for data analysis. Males accounted for 58% with M:F of 1.4:1. The mean age was 40.4 ± 10.8 years. The prevalence of the risk factors is as follows: Obesity by waist hip ratio 48%; Analgesic abuse 44%; Obesity by BMI 25%; Hypertension 19% (self-reported previously diagnosed hypertension 7.7%); smoking 6%; diabetes mellitus 2%; and family history of CKD 0.6%. Familial history of hypertension was reported in 20.7%; diabetes in 10.8%; stroke in 2.8%; and heart diseases in 1.1%. **Conclusions:** Risk factors CKD are very common among the civil servants in Ilorin city, and are largely modifiable. There is need for a more aggressive public awareness programs on CKD and its risk factors. This will enhance early identification of individuals at risk, and will facilitate targeted intervention to stem the growing threat of CKD and its consequences.