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ABS/2011-PR01

RELATIONSHIP BETWEEN OBESITY INDICATORS AND REDUCED RENAL FUNCTION AMONG ADULTS IN A RURAL COMMUNITY

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Background: Obesity is defined as a body mass index (BMI) ³30kg/m² or body fat percentage (BF) ³ 25% for males and 32% for females. It is a growing global epidemic and a risk factor for numerous disease conditions including, insulin resistance, glucose intolerance, diabetes mellitus, hypertension, dyslipidemia, chronic kidney disease, sleep apnoea, arthritis, hyperuricemia, gall bladder disease, and certain types of cancer. Indicators of obesity include, waist circumference (WC), waist-hip ratio (WHR), BMI and BF. Though obesity has been associated with chronic kidney disease, there is no consensus on the relationship between obesity indicators, CKD and other metabolic risks.

Aim and objectives: To determine the prevalence of obesity among study population using the various obesity indicators; and the relationship between obesity indicators and reduced renal function.

Methods: This is a community-based cross-sectional study. Five hundred and twenty adults residing in the community were recruited by cluster sampling. Data on their socio-demographic characteristics and health status were obtained and recorded in a structured questionnaire. Body fat percentage was calculated using the Deurenberg's equation. Blood samples were collected on site for determination of serum creatinine and glomerular filtration rate was then estimated using the Cockcroft-Gault (CG) equation. Early- morning urine was also tested for proteinuria.

Results: The sex ratio of participants was 1:1.9 (M:F). Age range was 18-90 year while the mean age was 46.7±17.8 year. The mean WC was 86.2 ± 11.1cm, WHR 0.9 ± 0.1, BMI 25.0 ±4.7kg/m² and mean BF was 38.6 ± 8.6%. BF increased with increasing age. The overall prevalence of Obesity defined by abnormal BMI, BF and WC was 14.1%, 57.4% and 30% respectively. The mean BF and WC were significantly lower in participants with reduced renal function compared to normal. The mean BMI did not differ significantly between the two groups. A reduced BMI was significantly associated with, and predicted reduced renal function.

Conclusion: The prevalence of obesity is high among the population studied. It was much higher when defined using abnormal BF. Mean BF and WC is significantly lower among patients with reduced renal function however there is no significant association between BF, WC and reduced renal function. Finally reduced BMI significantly predicts reduced renal function.

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PATTERN OF SERUM URIC ACID CONCENTRATION AND ITS CORRELATES IN YOUNG ADULT NIGERIANS

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Background: The prevalence of chronic kidney disease (CKD) is on the increase globally with attendant heavy disease burden and high morbidity and mortality particularly in developing countries. Due to the magnitude of CKD burden, poor infrastructure and the high cost of care, especially for ESRD, preventive measures are recommended. Early detection of modifiable risk factors of CKD in population groups and early intervention is the most plausible strategy to possibly prevent CKD and thereby reduce its prevalence. Hyperuricaemia and high-normal serum uric acid levels have been linked to CVD, hypertension, renal disease and metabolic syndrome and recent study showed that treatment with allopurinol slowed the progression of renal disease and reduced the risk of cardiovascular events in patients with CKD. This study was therefore undertaken to determine the pattern of serum uric acid levels and its correlates in young healthy adult Nigerians.

Methods: The demographics of 300 undergraduates of the University of Port Harcourt were obtained using a structured questionnaire designed for the study. Body mass index was calculated from their weights and heights and blood pressures measured following standard protocols. Serum uric acid levels and other laboratory parameters were determined. Data were analyzed using SPSS version 17.0 and results presented as mean±SD and percentages. Comparisons were done using independent variable t-test and Pearson's Chi square test as appropriate. Pearson's correlation test was used to determine the correlates of serum uric acid. P-values < 0.05 were considered statistically significant.

Results: Age of subjects ranged from 17 to 35 years with a mean of 22.53±2.67 years. Males comprised 218 (72.7%) while 82 (27.3%) were females. The mean BMI of the study population was 23.28±2.95kg/m^2 and serum uric acid concentration was 222.43±73.34µmol/L, while the means for systolic blood pressure, diastolic blood pressure and serum sodium concentration were 117.96±9.80mmHg, 74.29±8.24mmHg and 132.25±9.21mmol/L respectively. A total of 248 (82.7%) of the subjects admitted to soft drinks consumption, 85(28.3%) to alcohol consumption while only 18 (6.0%) were current cigarette smokers. Dietary salt intake was reported to be low by 33(11.0%) of subjects, high 10(3.3%) and moderate 257(85.7%). It was difficult to determine dietary salt consumption, what is reported here are subjects' self assessments of their salt intake. Prevalence of hyperuricaemia (serum uric acid > 420µmol/L in males and >360µmol/L in females) was 2.3% in the study population and the prevalence of high normal serum uric acid (310-330µmol/L) was 3%. Systolic blood pressure 140mmHg was recorded in 11(3.67%), systolic blood pressure in the pre-hypertension range of 120-139mmHg 73(24.33%), while diastolic blood pressure 90mmHg was seen in 21(7.00%) and diastolic blood pressure of 80 to 89mmHg was reported in 25(8.33%). The prevalence of obesity BMI 30kg/m^2 was 9(3.00%), while overweight had a prevalence of 57(19.00%). Females in the study population were significantly younger [21.43±2.34 vs 22.95±2.71 years, P=0.00] and also had lower

blood pressures [SBP 113.41±7.90 vs 119.67±9.91 mmHg, P=0.000; DBP 71.06±8.08 vs 75.50±7.99 mmHg, P=0.000]; their serum uric acid concentration was lower [210.12±78.58 vs 227.06±70.90 μmol/L], but only had a tendency towards significance (P=0.07). Serum sodium concentration and BMI were not significantly different [P=0.132 and 0.769 respectively].

Of the variables tested, only body weight [r=0.145, P=0.012] and BMI [r=0.139, P=0.016] had significant positive correlation with serum uric acid. Systolic blood pressure [r=0.053, P=0.358], diastolic blood pressure [r=0.033, P=0.567] and age [r=0.005, P=0.927] had direct but not significant relationship with serum uric acid, while serum sodium concentration [r=-0.088, P=0.129] had an inverse, but also not statistically significant relationship with serum uric acid concentration.

Conclusion: The prevalence of hyperuricaemia and high normal serum uric acid level are relatively low in this young adult population and body weight and BMI significantly correlated with serum uric acid level.

Keywords: serum uric acid, hyperuricaemia, young adults, Nigeria

ABS/2011-PR03
KNOWLEDGE OF KIDNEY DISEASES AMONG UNIVERSITY OF BENIN NON- MEDICAL STUDENTS

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Background: End-stage renal disease (ESRD) is on the increase globally. Renal replacement therapy and management of the ESRD patient is very expensive. Patients with ESRD in Nigeria and their relatives have to bear the cost of treatment. Prevention is thus the best option. Knowledge of kidney disease in the population will aid its prevention. The aim of this study was to determine the knowledge of kidney diseases among university undergraduates.

Methods: A 13- item self administered questionnaire was offered to 3rd and 4th year students of the University of Benin studying Linguistics, Electrical Engineering and Accounting. The data obtained was analysed using SPSS version 16

Results: Out of 350 questionnaires administered, 295 were returned, 183(62%) males and 112 females (38%) with a male - female ratio of 1.6:1. The mean age of respondents was 27.8±3.2years with a range of 18-37years. Students of Linguistics, Electrical engineering and Accounting made up 34.2%, 38.3% and 27.5% of respondents respectively. 5% of the respondents did not know the number of kidneys in the body. 28% did not know the location of the kidneys in the body. 68%, 61% and 49% of respondents believed that inability to pass urine; body swelling and weakness respectively were the symptoms of kidney disease. Their knowledge of the causes of kidney disease was poor; 44% were aware that diabetes mellitus could cause kidney disease but only 25% knew of the association between kidney disease and hypertension. 48% of respondents believed in alternative medicine for the treatment of kidney disease such as spiritual healing, herbal therapy and urine therapy. Their knowledge of haemodialysis was poor (37%) but 89% were aware of kidney transplantation as an option for renal replacement therapy.

Conclusion: The knowledge of the respondents on kidney diseases was poor. There is a need for a better education of Nigerians on kidney disease.

ABS/2011-PR04

SCREENING FOR RISK FACTORS OF KIDNEY DISEASES IN AN OIL PRODUCING COMMUNITY IN RIVERS STATE

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Background: Chronic Kidney Disease is associated with many traditional and nontraditional risk factors. Petroleum products have been associated with kidney diseases. Screening for these risk factors is associated with prompt interventions and preventive measures in kidney disease.

Aims and Objective: The aims and objective of this study is to determine the frequency of risk factors of kidney diseases in an oil producing community in Rivers State.

Subjects and method: This is a cross sectional study. The study location was Ido in Asari Toru Local Government Area of Rivers State. All subjects aged 18 years and above who gave consent were recruited for the study. Their biodata, relevant medical history, clinical and laboratory parameters were documented. The obtained data was analysed with SPSS Vs 15.0

Results: A total of 105 persons participated in the study. The age range was 18 to 86 years, 50.0% were above 50 years. Females were 75.0%, 33.3% had post primary education, 14.3% were retired and 37.2% were traders. 10.5% and 27.8% had history of significant intake of tobacco and alcohol respectively. 13.3% were known hypertensive, 4.8% were known diabetic and non with past history of kidney disease. 22.9% had regular at least thrice weekly exercise however 25.7% were obessed. 39.4% had elevated blood pressure, 4.8% had random blood sugar 200mg/dl and above. Total serum cholesterol was higher than 200mg/dl in 28.6%, LDL was higher 150mg/dl in 24.8%, and 38.4% had proteinuria.

Conclusion: The prevalence of risk factors for kidney diseases is high in this oil producing community. What is the role of oil or its exploration?

ABS/2011-PR05

PREVALENCE OF CHRONIC KIDNEY DISEASE AND RISK FACTORS OF CHRONIC KIDNEY DISEASE IN A RURAL ADULT POPULATION IN NIGER DELTA, NIGERIA

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Background: The prevalence of chronic kidney disease is increasing globally as a result of increasing burden of non-communicable diseases and other risk factors in both urban and rural populations.

Aim: To determine the prevalence of CKD and its risk factors in Odufor-Etche, a rural community in Rivers State, Nigeria.

Ethical consideration: The study was approved by the ethics committee of the college of health sciences of the University and only consenting subjects were included in the study.

Methods: Socio-demographic, anthropometric, clinical and laboratory parameters of consecutive subjects were determined following standard protocols. Estimated GFR was calculated using MDRD formula.

Results: 300 subjects were studied; 140 (46.7%) males and 160 (53.3%) females. The mean age was 40.55±17.30 years. Mean BMI, systolic and diastolic blood pressures were 21.30±4.06Kg/m^2, 120.02±15.99 mmHg and 71.74±11.19 mmHg respectively. Mean FBG was 4.85±0.93mmol/L, total cholesterol 4.28±0.68mmol/l, triglyceride 1.33±0.28mmol/L, HDL 0.92±0.18mmol/L and LDL 2.78±0.62mmol/L. Being from a farming community level of physical activity was high with 52.7% engaging in moderate intensity, 30.0% very intense and 17.3% mild physical activity. Current cigarette smokers accounted for 34(11.3%) of the population and those who snuffed tobacco 40(13.3%); there were no female smokers. The prevalence of CKD[eGFR<60ml/min/1.73m^2] was, 6(2.0%), mostly females 5(83.3%) with mean age and eGFR of 50.67±23.30 years and 44.97±16.01 ml/min/1.73m^2. Prevalence of diabetes mellitus [12(4.0%)], obesity 15(5.0%) and metabolic syndrome [19(6.3%)], while the prevalence of hyperfiltration [60(20.0%)] and hypertension [50(16.7%)] were relatively high. Dyslipidaemia showed a variable prevalence, high LDL 5(1.7%), hypercholestrolaemia 19(6.3%), hypertriglyceridaemia 34(11.3%) and low HDL dyslipidaemia alarmingly high 257(85.7%).

Conclusion: The prevalence of CKD is low in this rural community. Prevalence rates of risk factors are relatively low except for hypertension and hyperfiltration. There is however, need for health promotion activities.

ABS/2011-PR06

PREVALENCE OF CHRONIC KIDNEY DISEASE AND ITS FACTORS AMONGST ADULTS IN A RURAL POPULATION IN EDO STATE, NIGERIA

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Background: Chronic kidney disease (CKD) in recent times has become a global public health concern, increasing worldwide at an annual growth rate of 8% with both high costs and poor outcomes of treatment. The adverse outcomes of CKD such as end stage renal disease (ESRD), cardiovascular morbidity and mortality and premature death are enormous in our part of the world due to paucity of facilities for renal replacement therapy and high cost of services for management of ESRD. Prevention at all levels is the most effective way of retarding this fast growing problem.

Aims and Objective: The aim of the study was to determine the prevalence of CKD and its risk factors amongst adults in a rural community in Edo State.

Methodology: This is a community-based cross-sectional study. Five hundred and twenty adults residing in the community were recruited by cluster sampling. Data on their socio-demographic characteristics and

health status were obtained and recorded in a structured questionnaire. Early morning urine was examined for urinary abnormalities such as proteinuria and haematuria, using the 10 parameter dipstix (Medi-Test Combi 10®). Blood samples were collected on site for determination of serum creatinine, random blood sugar (RBS) and packed cell volume (PCV). Glomerular filtration rate was then estimated using the Cockcroft-Gault (CG) equation. All Individuals who had urinary abnormalities as detected by dipstix were re-visited after a period of three months to confirm persistence of these abnormalities.

Results: A total of 476 participants completed the study giving a response rate of 91.5%. Male to Female ratio was 1:1.9. The mean age of participants was 46.7±17.8 yr. The mean systolic blood pressure (SBP) and diastolic blood pressure (DBP) were 127± 20mmHg and 78±12mmHg respectively. Significant Proteinuria was detected in 21 participants (4.4% of the study population), out of which 18 (3.6% of the population) had persistent proteinuria. Prevalence of hypertension was 34.2% and diabetes 2.1%. The prevalence of CKD according to NKF K/DOQI definition was 27.2%. Risk factors significantly associated with CKD were increasing age, systolic and diastolic hypertension, proteinuria, use of NSAIDS, use of skin lightening agents and use of herbal remedies. Increasing age and systolic hypertension were the strongest independent risk factors of CKD. Prevalence of obesity was significantly lower among individuals with CKD, and a BMI< 30kg/m^2 was predictive of CKD.

Conclusion: Chronic kidney disease is common in Ogbona and the prevalence increases with increasing age. The risk factors of CKD are prevalent in the community. Screening for the early detection of CKD and its risk factors is strongly recommended to retard the growth of the problem

ABS/2011-PR07
RESULTS OF ROUTINE SCREENING FOR MARKERS OF CHRONIC KIDNEY DISEASE IN ADULTS AND SECONDARY SCHOOL STUDENTS IN A SEMI-URBAN COMMUNITY DURING WORLD KIDNEY DAY (WKD) 2010.

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Background: The prevalence of chronic kidney disease (CKD) has assumed epidemic proportion globally and data from Nigeria suggest a rising trend. Unfortunately majority of affected patients present late and die early from uraemia and cardiovascular disease. Renal replacement therapy options are unaffordable and therefore unsustainable b y those with advanced disease hence our only hope is in mounting preventive nephrology programs. This has led to the clarion call for commemoration of WKD annually on the first Thursday in the month of March. As part of the program for 2010 the Obafemi Awolowo University Teaching Hospitals Complex (OAUTHC) WKD team conducted screening for markers of CKD in a secondary school as well as in volunteers after public enlightenment and sensitization programs with the aim of detecting (if any) the presence of proteinuria, hypertension and obesity.

Methodology: Our entire team conducted free medical screening for students of a secondary school and interested members of the public. The screening included blood pressure check, weight and height assessments as well as urinalysis using medi-test Combi 2 (Macherey Nagel, Germany) test strips. The summary of the results of the screening is outlined below.

Results: A total of 1014 participants were screened, 777(76.6.%) were students aged less than 20 years, 76 (7.5%) participants were in the 20-39 year age range, 91(9.1%) were in 40-59 years age range, 62 (6.1%)

were in the 60-79 year age range while only 30 (3%) were older than 70 years. Of the participants, 513 (50.5%) were females while 501(49.5%) were males. Hypertension was detected in 15 (1.9%) of participants aged less than 20 years, while the prevalence increased exponentially after 4th decade. 44% of participants aged 40 and above were found to be hypertensive ($p<0.0001$). On dipstick testing, 535 (52.8%) had no proteinuria while the remaining 479 (47.2%) had varying degrees of proteinuria which worsened with increasing age ($p<0.0001$). Hypertension demonstrated weak positive correlation with the degree of proteinuria ($r=0.157$, $p<0.0001$). BMI was less than 20kg/m^2 in 43.9% while 38.3% had BMI between 20kg/m^2 -25kg/m^2 range. It was higher than 25kg/m^2 in 17.8%.

Conclusion: Routine screening for proteinuria should be encouraged in all individuals ie adults and children alike while that for hypertension should be mandatory from fourth decade of life Lifestyle modification should be encouraged to reduce incidence of obesity.

ABS/2011-D01
UNCOMMON COMPLICATIONS OF HAEMODIALYSIS VASCULAR ACCESS – 2 CASE REPORTS

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Background: Haemodialysis vascular access plays significant role in determination of the adequacy and efficiency of haemodialysis. Haemodialysis vascular access can be temporal, semi-permanent or permanent depending on the durability of the access. Complications arising from the vascular access constitute limitations. And also contribute to morbidity and mortality associated with haemodialysis. Though complications are common with temporal access, occasional with the semipermanent access, they are not absent with the permanent type of vascular access. These complications can be early or late, mild or severe, frequent or rare. We report 2 uncommon but severe complications resulting from haemodialysis vascular access in end-stage kidney disease patients.

Case 1 is a 58 years old businessman on maintenance haemodialysis from diabetic nephropathy. He was initially on internal jugular for 6 weeks but later radio-cephalic AVF created as vascular access for haemodialysis. He was on regular thrice weekly haemodialysis for 3 years. He presented with septicaemia resulting from infected aneurysm of the AVF. The AVF was subsequently closed surgically and other medications were given.

Case 2 is a 65 years old man, a retiree that had end stage kidney disease resulting from chronic glomerulonephritis. He was on maintenance haemodialysis for 11 months, initially (9 months) using femoral vein and later internal jugular vein as vascular access. He had a live related kidney transplant 2 weeks earlier but presented with acute loss of the transplanted kidney following thrombosis of the femoral vein on same site with the transplanted kidney. He had vascular intervention and the transplanted kidney regained function.

Conclusion: Complications resulting from vascular access can be life threatening, thus the need for optimum use and care of the vascular access.

ABS/2011-D02

SPECTRUM OF RENAL DISEASE IN PATIENTS UNDERGOING HAEMODIALYSIS IN A PRIVATE KIDNEY CARE CENTRE IN RIVERS STATE

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Background: Nigeria is not exempted from the global increase in prevalence of kidney disease. The spectrum of kidney disease varies from mild/transient acute renal injury to end stage renal disease requiring renal replacement therapy. Septicaemia and chronic glomerulonephritis has been variously reported as the commonest cause of acute and chronic kidney disease respectively.

Aim of this study: The aim of this study is to highlight the spectrum of kidney disease in patients presenting for haemodialysis in a private kidney care centre in Port Harcourt Rivers State.

Subjects and method: This is a retrospective study. The biodata, clinical and laboratory parameters of patients presenting for haemodialysis from 1st August 2008 to 31st July 2010 were obtained and entered in a spreadsheet. The data obtained was analysed using SPSS VS 15.0

Results: A total of one hundred and one patients had haemodialysis during the period studied, 54 (53.5%) males and 47 (46.5%) females. The age range was 15 to 85 years, 81.4% were less than 60 years. Fifty nine (57.4%) patients were in end stage kidney disease and 40(39.6%) had acute renal failure. 14.8% were HIV seropositive. Hypertensive nephrosclerosis was the commonest cause of chronic renal failure occurring in 24.6% of patients. Septicaemia was the commonest cause of acute kidney injury occurring in 40.0% of the patients. Other causes were chronic glomerulonephritis, diabetes nephropathy, obstructive uropathy, adult polycystic kidney disease, toxic nephropathy for chronic kidney disease and gastroenteritis, haemorhage, acute glomerulonephritis for acute renal failure.

Conclusion: Hypertensive nephrosclerosis and septicaemia were the commonest cause of chronic and acute renal failure respectively.

ABS/2011-D03
PATTERN OF PATIENT PRESENTATION IN A NEW DIALYSIS FACILITY AT NAUTH, NNEWI (NOV 2009- NOV 2010)

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Objective: To give a one year review on haemodialysis as seen in the dialysis centre of the Nnamdi Azikiwe University Teaching Hospital Nnewi (NAUTH)- the experience of the first year of the centre (Nov. 2009- Nov. 2010).

Method: All cases of renal disease requiring haemodialysis whether acutely or chronically, managed by the dialysis centre at NAUTH Nnewi between November 2009 to November 2010 were included in the study.

Data was obtained from the renal register of the centre. This included the biodata, type and cause of renal disease, the clinical and laboratory data, frequency of haemodialysis and patient outcome. These were recorded and analyzed using SPSS version 13.0.

Result: A total of 63 patients received haemodialysis during the period under review. Thirty-eight (60.3%) were males while 25 (39.7%) were females with a male: female ratio of 1.5: 1. Their mean age was 46 ± 15 years. The most common diagnosis was hypertensive nephropathy 27(42.2%) followed by CGN 16 (25%) and Diabetic nephropathy in 13 (20.3%). Three patients (4.7%) had obstructive uropathy, two had acute renal failure, one patient had severe renal artery stenosis and the remaining one had ADPKD. The most common indication for dialysis was uremic encephalopathy. The mean systolic and diastolic blood pressures were 157± 23 and 94 ±14 mmHg respectively. Majority of the patients were hypertensive 59 (993.6%) while 62 (98.450 were anemic. The most common complication during dialysis was hypotension occurring in 4 (6.3%0 f the patients. Only 1.6% had renal transplant, 46.9% are still dialyzing and being followed up while 42.25 were lost to follow up. Only 7.8% were recorded dead.

Conclusion: Kidney disease is prevalent in our environment. Patients present late and in poor clinical condition. Poverty and ignorance were the major setbacks as patients were not able to get adequate dialysis due to financial constraint. Most of the patients that needed dialysis did not get it from the centre because they were seropositive for hepatitis B, C and HIV virus.

ABS/2011-D04
CLINICAL PROFILE, INTERVENTION AND OUTCOME OF PATIENTS DIALYSED AT LAGOS STATE UNIVERSITY TEACHING HOSPITAL (LASUTH), IKEJA.

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Introduction: Hemodialysis at the critical care unit (CCU) of the Lagos State University Teaching Hospital(LASUTH), Ikeja commenced in November 2009.This study presents a review of the clinical profile, intervention and outcome of patients dialysed at the Unit between November 2009 to November 2010.

Methods: A retrospective study of all patients dialysed at the CCU of LASUTH, Ikeja between November 2009 and November 2010 was done. Data from the dialysis charts and available case notes were retrieved from the medical records department. Data relating to age, gender, type and aetiology of renal function impairment, number and duration of hemodialysis, vascular access route and outcome were obtained. A descriptive analysis of data was done using the statistical software SPSS version 15.

Results: Twenty two (22) patients were dialysed during the study period. The mean age was 45.6years ± 18.2 (range 15 to 80). There were 16 males and 6 females. Male:female ratio was 8:3. The clinical diagnoses were acute kidney injury (AKI) in 7(32%) patients and End Stage Renal Disease(ESRD) in 15(68%) patients. The most common cause of AKI was obstetric related complication occurring in 2 (9.1%) patients. Hypertension was the commonest cause of ESRD occurring in 6 (27%) patients while diabetes and chronic glomerulonephritis occurred in 4(18%) each. The most common access route was internal jugular 13(59%) while nine (41%) patients had repeated femoral cannulation. Most patients had infrequent dialysis. Of the 15 ESRD patients, only 4(18%) could afford more than 10 hemodialysis sessions while 8(32%) had less than 10 dialysis sessions. Four (18%) AKI recovered renal function. Three (14%) ESRD were referred for renal transplantation, 3(14%) were lost to follow up, 2(9%) are still on maintenance hemodialysis while 10(45.5%) died.

Conclusion: Young adult males constituted majority of the patients dialysed. The most common cause of ESRD was hypertensive nephrosclerosis. Internal jugular cannulation was the most frequently used access route.

ABS/2011-D05
A ONE YEAR REVIEW OF PATIENTS UNDERGOING TREATMENT IN A NEW DIALYSIS CENTER OFFERING SUBSIDISED TREATMENT

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Background: Management of end-stage renal disease poses a great economic and social burden on patients, their families and the community. Increase in hospital prevalence rates of chronic kidney disease (CKD) has resulted in the emergence of new haemodialysis units in the country. Majority of patients with CKD could not afford the cost of renal replacement therapy. This has prompted the Bauchi State government to subsidise the treatment for all Nigerians affected with this disease. Dialysis session cost only 5000 naira with no reuse, in its newly commissioned haemodialysis center.

Methods: A retrospective review of patients treated over one year period to study their clinical and demographic characteristics and compare with previous reports from other parts of the country.

Results: Seventy patients were referred to the center during the study period, seven were transferred to other centers on request. There were 27 patients on regular haemodialysis for mean duration 8.2± 4.2 months. Among those on regular dialysis 17 were males and had a mean age 41.9±14.2. Their mean systolic and diastolic blood pressures were 159±26 and 78± 16. The mean Haematocrit was 27± 5.4 with only 30% on erythropoietin regularly.

Conclusion: This study has shown that with subsidy on the cost of dialysis many Nigerian CKD patients can be sustained on maintenance haemodialysis with fair blood pressure and haematocrit levels. Unlike previous reports were majority of the patients could not afford dialysis for one month majority of our patients were on dialysis for one year. We therefore call on the government subsidise the cost of this treatment to our patients.

ABS/2011-D06
CLINICAL OUTCOMES OF DIALYSIS TREATED ACUTE KIDNEY INJURY PATIENTS

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Background: Acute kidney injury is a common cause of adult medical admission in Nigeria and significant proportion of our patients receive renal replacement therapy as part of their management but data on outcomes of these patients are sparse.

Study objective: To determine the clinical outcomes of dialysis treated AKI patients in our hospital.

Methods: The clinical data of 62 Intermitent haemodialysis (IHD) treated AKI patients treated at the University of Port Harcourt teaching hospital during an interrupted six year period were analyzed.

Results: They comprised 34 males and 28 females (M/F=1.2:1), with a mean age of 41.3 $\pm$ 18.5(15-83) years. Over 70% of the patients were under fifty years of age. The leading medical aetio-pathologies causing AKI were, sepsis (22.7%), acute glomerulonephritis (20.5%), acute gastroenteritis (15.9%) and toxic nephropathies (11.4%). The mean e-GFR of the patients at presentation was quite low 14.7 $\pm$ 5.8(6.7-34) mls/min/1.73m^2. 93.5% of patients were in the **F**ailure category of RIFLE. Mean dialysis period was 2.3 $\pm$ 1.3 weeks and mean number of dialysis sessions received was 2.3 $\pm$ 1.7. Of the 62 patients 29(46.8%) survived and were discharged from the hospital, 27(43.5%) died in hospital while 6(9.7%) absconded from treatment. Comparison of the demographic, clinical and RIFLE status of the dead and the surviving patients showed that the survivors had better RIFLE Grade than those who died ($p<0.001$)

Conclusions: Hospital mortality rate of dialysis treated AKI patients is high and the severity of renal damage at presentation may be an important factor

ABS/2011-D07
PRURITUS IN PATIENTS ON MAINTENANCE HAEMODIALYSIS IN BENIN CITY

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Background: Pruritus is an unpleasant cutaneous sensation prompting a desire to scratch. It can be very disturbing and is common in patients on maintenance HD. Its pathogenesis is not very clear but has been attributed to diverse factors including uremia and iron deficiency anemia.

Aims/Objectives: The aims and objectives of this study were, to determine the frequency of pruritus in hemodialysis patients at the University of Benin Teaching Hospital, Benin city; to evaluate the relationship of pruritus in these patients with age, sex, BMI, skin changes, peripheral neuropathy, duration of dialysis, and laboratory findings (including PCV, serum creatinine, urea, calcium, and phosphate) and to determine the percentage of patients with increasing pruritus during and after dialysis.

Method: Consenting patients on maintenance hemodialysis were recruited for the study. Some relevant clinical and laboratory parameters (age, sex, BMI, skin changes, neuropathy, presence of pruritus, severity and intensity of pruritus, serum urea, creatinine, calcium and phosphate) were collated and data generated were analysed using the SPSS version 17 package.

Results: A total of 50 patients participated in the study. Twenty four (48%) of these patients had pruritus. Of the 24 patients with pruritus, 14 (58.3%) were males while 10 (41.7%) were females. The mean age, BMI and duration of hemodialysis of the patients with pruritus were 51.0±13.61yrs, 23.3±1.77kg/m^2 and 7.4±9.31months respectively. Also, the mean serum urea, calcium and PCV of the patients were 252.1±65.10mg/dl, 7.0±1.04mg/dl and 25.5±4.38% respectively. Eight (33.3%) had an increasing intensity of pruritus during and after hemodialysis. Twelve (50%) of the patients had mild pruritus while another 12 (50%) had moderate pruritus. There was no case of severe pruritus. Anemia, serum urea, duration of hemodialysis and increasing age of patients were found to be significantly related to pruritus. (Using Pearson's correlation)

Conclusion: Pruritus is relatively prevalent amongst our patients on maintenance HD and factors significantly associated with this condition include anemia, serum urea, and age of patient as well as duration on HD.

ABS/2011-D08
PROVIDING MAINTENANCE HAEMODIALYSIS IN A RESOURCE POOR COUNTRY: THE LAGOS UNIVERSITY TEACHING HOSPITAL EXPERIENCE

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Background to study: Providing maintenance haemodialysis for patients with end-stage renal disease (ESRD) is associated with high costs and poor outcomes. In addition to cost of the dialysis procedure, there is the additional cost of creating and maintaining vascular access and erythropoiesis stimulating agent. In Nigeria, patients with ESRD pay out-of-pocket for maintenance haemodialysis and other aspects of therapy. We reviewed the experience of our hospital-based haemodialysis unit.

Methods: We reviewed the records of all patients who entered into the maintenance haemodialysis program of our dialysis unit between 1st January 2009 and 31st September 2010.

Results: One hundred and twenty patients entered into the maintenance dialysis program of our unit during the period of review. 72(60%) of the patients were male while 48(40%) were female. The mean age of the study population was 47yrs $\pm$ 14yrs with 51.6% of the patients being younger than 50yrs of age. The aetiology of chronic kidney disease was hypertension in 45% of cases, chronic glomeruonephritis in 13.5%, diabetic nephropathy in 12.5% and obstructive uropathy in 12.5% of the cases. The mean haemoglobin concentration at commencement of dialysis was 7.3g/dL $\pm$ 1.6g/dL. The initial vascular access was femoral vein cannulation in all the patients. The vascular access was changed to a non-tunneled internal jugular catheter in 12.5% of the patient after a mean of 6.6 $\pm$ 3.9 dialysis sessions. 25% of the patients received parenteral iron therapy while while 24.2% received erythropoietin. 73.5% of the patients require blood transfusion at some point with 33% receiving 5 or more pints of blood. 3.3% of the patients of the patients were having thrice weekly dialysis, 21.7% twice weekly, 23.3% once weekly, 16.7% once in two weeks, 2.5% once in three week and 11.7% once monthly. At the time of review, 8.3% were of the patients were known to be dead, 38.3% were lost to follow-up and 53.3% remained on maintenance dialysis.

Conclusion: Majority of patients with ESRD on maintenance haemodialysis in our unit are under-dialysed, have inadequate anaemia treatment and are over-transfused with blood with resultant high mortality rates.

ABS/2011-GN01

NEWER VS OLDER ANTIHYPERTENSIVE AGENTS IN AFRICAN HYPERTENSIVE PATIENTS (NOAAH) TRIAL: STUDY DESIGN AND FIRST BASELINE RESULTS (NCT01030458)

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Background: Sub-Saharan Africa experiences an epidemic surge in hypertension. Studies in African Americans led to the recommendation to initiate treatment with a diuretic or a low-dose fixed combination

including a diuretic. We mounted the Newer versus Older Antihypertensive agents in African Hypertensive Patients (NOAAH) trial (NCT01030458) to compare in native African patients a fixed combination of newer drugs, not involving a diuretic, with a combination of older drugs including a diuretic.

Methods: Previously treated (<2 drugs) or untreated patients (30–69 years) are eligible, if they have uncomplicated grade 1 or 2 hypertension (140–179/90–109 mm Hg). Patients with e”3 risk factors, target organ damage or diabetes are excluded. After a 4 week treatment free run-in period, 180 patients will be randomized to once daily bisoprolol/hydrochlorothiazide 5/6.25 mg or amlodipine/valsartan 5/160 mg. To attain the target (<140/<90 mm Hg) during the 6 month follow-up, the doses of bisoprolol and amlodipine in the combination tablets will be increased to 10 mg/day. Subsequently ?-methyldopa (up to 2 gram/day) or hydralazine (up to 200 mg/day) can be added to the randomized medication. NOAAH is powered to demonstrate a 5 mm Hg between-group difference in the sitting systolic blood pressure, the primary endpoint, with a 2-sided *P*-value of 0.01 and 90% power. NOAAH is an investigator-led clinical trial and fully complies with the Helsinki declaration.

Results: Six centers in 4 sub-Saharan countries started patient recruitment on September 1, 2010. On December 1, 190 patients had been screened, 161 had been enrolled, and 42 were randomized and in follow-up. The trial will be completed in the third quarter of 2011.

Conclusions: NOAAH is the first randomized multicenter trial of antihypertensive medications in native African patients in sub-Saharan Africa and will inform future guidelines.

Keywords: Antihypertensive therapy, health policy and outcome research, randomized clinical trial, special populations

ABS/2011-GN02

FREQUENCY OF CONTRAST-INDUCED NEPHROPATHY AMONG PATIENTS UNDERGOING CONTRAST PROCEDURES IN UBTH

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Background: Contrast-induced nephropathy (CIN) is a significant yet underestimated problem in clinical practice. The increasing use of contrast media in diagnostic and interventional procedures over the last 30years has resulted in CIN becoming the third leading cause of hospital acquired acute renal failure (ARF) in developed countries. There is currently a paucity of data on the incidence of CIN in our environment.

Objectives: To determine the frequency and risk factors of CIN amongst patients receiving intravenous contrast in University of Benin Teaching Hospital (UBTH) and to validate the CIN predictive risk score in the study population.

Methodology: This is a hospital-based prospective observational study. One hundred and eighty (180) patients undergoing either contrast CT or Intravenous Urography were recruited consecutively over a 6 month period. Data on their sociodemographic characteristics and health status were obtained and recorded in a questionnaire. Venous blood and urine were collected for biochemical estimations before contrast exposure and up to 72 hours post-exposure.

Results: The frequency of CIN was 35.9% (51 out of 142). One patient required haemodialysis. Baseline renal insufficiency, anaemia and age >55 years were significant risk factors of CIN. Baseline renal insufficiency, anaemia and age >55yrs were predictive of CIN in univariate but not multivariate analysis. A higher proportion of patients who developed CIN (11.8%) had high risk scores compared to those who did not develop CIN(8.8%); this difference was however not statistically significant (p = 0.600).

Conclusion: The frequency of CIN is high among patients having contrast enhancing CT and IVU in UBTH. Baseline renal insufficiency, anaemia and increasing age are the most significant risk factor and predictors of CIN among the patients. The CIN predictive risk score does not sufficiently identify patients at risk of CIN in UBTH.

ABS/2011-GN03

CLINICAL AND LABORATORY FINDINGS OF NEPHROTIC SYNDROME SEEN IN LAGOS STATE UNIVERSITY TEACHING HOSPITAL (LASUTH), IKEJA, LAGOS

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Introduction: Nephrotic syndrome has diverse clinical presentation likewise causes. Primary or idiopathic glomerulonephritis is seen in 75% of nephrotic syndrome patients. Prevalence of the various histological patterns varies with age and race and underlying aetiology. For example, it is known that minimal change disease (MCD) is commonly seen in children, especially in temperate regions, while focal segmental glomerulosclerosis (FSGS) is associated with human immune-deficiency virus associated nephropathy (HIVAN).This study reviews the clinical, biochemical and histological patterns of nephrotic syndrome patients seen at LASUTH within June 2006 and November 2010.

Methods: The study is a retrospective review of patients seen between June 2006 and November 2010 at the Medical Out Patient Department of LASUTH. Each patient case note was studied for documented clinical, laboratory biochemical, haematological and histological findings. A descriptive analysis of the data was done using SPSS 15.

Results: Forty six cases were reviewed, there were 16 males and 30 females with male : female ratio of 1:1.7, while the modal age was 20 – 39 years in both sexes. The most frequent clinical presentation were leg swelling (95.7%), frothy urine 91.3%, followed by facial swelling (88.9%) respectively. The mean hypercholesterolaemia and hypertriglyceridaemia was 252.5mg/dl and 152.4mg/dl respectively. The mean 24 hour urinary protein was 2.96g/24hrs ± of 2.8 and serum albumin of 2.90 ± 0.967. 14 patients had renal biopsy; (9) 64.3% had Focal Segmental Glomerulosclerosis (FSGS), while (3) 21.4% had minimal change disease (MCD) and 1 patient had Membranoglomerulonephritis (MGN) 7.1%, and (1) , 7.1% inconclusive.

Conclusion: The most common mode of presentation in the studied patients was pedal oedema and FSGS is the major cause of nephritic syndrome in the biopsied patients.

ABS/2011-GN04

A SINGLE CENTER 7 -YEAR EXPERIENCE WITH ESRD CARE IN NGERIA- A SURROGATE FOR POOR STATE OF ESRD CARE IN NIGERIA AND OTHER SUB-SAHARAN AFRICAN COUNTRIES: ADVOCACY FOR A GLOBAL FUND FOR ESRD CARE PROGRAM IN SUB-SAHARAN AFRICA

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Background: With the advent of Maintenance dialysis and kidney transplantation some 50 years ago, End stage renal disease (ESRD) is no longer a fatal disease. The benefit of this significant achievement is however not universal. There is a prevailing wide gap in the access to modern ESRD care between the developed and the developing countries, especially the sub-Saharan African (SSA) countries. With perhaps the singular exception of South Africa, ESRD care in most SSA countries is characterized by very poor access, poor dialysis adequacy, minimal access to kidney transplantation and consequently very high mortality rates within 90 days of diagnosis. Prevalent poverty and the absence of any Government intervention in ESRD care are responsible for the gross deficit in ESRD care in SSA countries.

Aims: A Single center ESRD –care experience in a Nigerian teaching hospital is presented as a surrogate case to demonstrate the prevailing ESRD care situation in Nigeria and most SSA-countries, over 50 years after the advent of modern ESRD care.

Methods: Retrospective evaluation of ESRD care experience, during a seven year period in a Nigerian teaching hospital.

Results: The data for 320 consecutive ESRD (200males, and 120 females, M/F=1.6:1) patients treated during a seven year period, were retrospectively analysed. They had a mean age of 46.2±17.6 years, with 40.8 percent of them in socio-economic classes V and VI. Over 80% funded dialysis treatment from direct and extended family sources .There was no government based support. Chronic glomerulopathy(45.6%), hypertensive nephropathy(29.7%) and diabetic nephropathy(17.5%) were the three leading causes of ESRD in the patients. Their mean e-GFR was 6.2±5.8 mls/min/1.73m^2. By JNC-7 criteria, 88.5 percent of the patients were hypertensive with 70.3% presenting with grade II hypertension. At presentation, 85% of the patients were in an unstable clinical state. The mean duration on dialysis before loss to the program was 5.2± 7.6 weeks, range 1-37 weeks. 314(98.1%) of the patients could sustain dialysis for only 1-12 weeks. Total dialysis sessions during the 7- year period were 1476, giving an average weekly dialysis session of 0.013± 0.05 hour per patient per week. All patients achieved an aggregate mean urea reduction ratio (URR) of 48.7±22.0 %, range 8-88% and an aggregate mean Kt/V of 0.94± 0.4, range 0.5-1.9 respectively. Within 90 days of entry into the ESRD care, 128(40%) were confirmed dead, 134(41.8%) had absconded and presumed dead while 8(2.5%) patients had opportunity for kidney transplant outside Nigeria.

Conclusions: The results confirm that ESRD care in this single centre was characterized by very poor access, gross dialysis inadequacy, over 90 percent case fatality within three month of diagnosis and very low opportunities for kidney transplantation. Poverty and the absence of Government support for ESRD care are responsible for the poor outcomes. This situation is not different from other parts of Nigeria and most other SSA countries, after over fifty years of modern ESRD care. Global focus on ESRD care in SSA has become imperative for sustainability and diversity.

Keywords: *ESRD care, Nigeria, Sub-Saharan Africa, Poor outcomes, Global intervention*

ABS/2011-GN05

BURDEN AND OUTCOME OF CHRONIC KIDNEY DISEASE AT THE UNIVERSITY OF CALABAR TEACHING HOSPITAL: A THREE YEAR RETROSPECTIVE STUDY

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Introduction: The lack of data on CKD is more evident in the former south eastern region comprising Cross River and Akwa Ibom states which until recently lacked specialist nephrology services. This study was designed to provide much needed baseline information on the burden, pattern and outcome of CKD in the region.

Methods: This was a retrospective study of patients with chronic kidney disease at the University of Calabar Teaching Hospital over a three year period from January 2007 to December 2009. Data was extracted from medical records using a structured form and was analyzed using STATA statistical package version 10.

Results: A total of 2041 patients were admitted in the period. Of these, 59 (2.9%) had CKD with a male to female ratio of 1:1.2 and the following mean variables: age 42.1±13.6 years, SBP 161.5±34.9 and DBP 99.2±21.9 mmHg, haemoatocrit 23.9±7.6 and creatinine 434.1±236µmol/l. About 19(32%) had CGN, 18(30%) had Hypertension while 8(13%) had diabetes. The remainder had sickle cell nephropathy, HIV related renal disease, APKD and obstructive uropathy. In terms of outcome, 33 patients were discharged for follow up, 20 were referred for dialysis outside the centre, 5 died while one left the hospital against medical advice.

Conclusion: The epidemiology of CKD is similar with other regions. However, renal replacement facilities are needed to obviate the problem of referral with the attendant increase in mortality and overall cost.

ABS/2011-GN06

RENAL HISTOPATHOLOGICAL STUDY OF HIV POSITIVE PATIENTS WITH CLINICAL EVIDENCE OF RENAL DISEASE IN BENIN CITY, NIGERIA

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Background: Human immunodeficiency virus (HIV) infection now constitutes a global disease burden. Currently about 33 million people are HIV positive worldwide. Renal involvement has been found to be associated with a number of cases, as evidenced by presence of proteinuria and reduced estimated glomerular filtration rate (eGFR). It is important to biopsy HIV patients with proteinuria, normal or increased kidney size, and/or deranged renal function, provided there are no contraindications.

Aims/Objectives: To determine the histopathological findings (on light microscopy) in HIV positive patients with renal disease seen in Benin City.

Methods: HIV positive patients with evidence of renal disease and consenting to renal biopsy were recruited for the study. All of these patients were naïve to antiretroviral drug usage. Those with contraindications for renal biopsy were not recruited. A statistical spreadsheet with age, sex, CD4 count, PCV, renal scan sizes and histological findings was made and analyzed via SPSS 17 package.

Results: A total of 17 patients, 10(58.8%) females and 7(41.2%) males participated in the study. The mean age, PCV, CD4 count and eGFR were 38.1±8.53years, 20.5±5.12%, 154.4±65.26cells/ul and 39.7±19.99ml/min. Twelve patients (70.5%) had proteinuria of 3+ and above. Twelve (70.6%) of the 17 patients had focal segmental glomerulosclerosis of the collapsing variant on light microscopy while 2(11.8%) had chronic pyelonephritis and another 2 (11.8%) had membranous glomerulonephritis and 1(5.9%) had minimal change disease.

Conclusion: From our limited renal histopathological study of HIV patients with renal disease, the predominant histological type encountered is the collapsing variant of FSGS, a pattern which is in keeping with reports from previous studies globally.

ABS/2011-GN07

THE DETERMINANTS OF AUTONOMIC DYSFUNCTION AMONG PRE DIALYSIS CHRONIC KIDNEY DISEASE (CKD) PATIENTS IN SOUTH-EAST NIGERIA

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Background: Autonomic dysfunction in CKD has been shown to occur more in certain clinical disease conditions. Our study objective is to determine demographic or disease-related factors that may influence the development and/or severity of autonomic dysfunction among pre dialysis CKD patients in South East Nigeria.

Methods: Eighty pre dialysis CKD patients were age and sex matched against healthy randomly selected volunteers. A questionnaire was administered to assess the symptoms and signs of autonomic dysfunction in the patients and control subjects. Autonomic dysfunction was determined using a battery of 5 non invasive cardiac autonomic function tests: Heart rate response (HRR) to standing, HRR to breathing, HRR to vasalva maneuver, resting tachycardia and blood pressure response to standing. In addition, some demographic factors (e. g. age, gender,) and disease- related factors (e. g. disease duration, blood pressure control, level of azotaemia, serum calcium phosphate index, glomerular filtration rate) were recorded. Data from this cross-sectional survey were analyzed by a multiple regression model to determine independent predictors of autonomic dysfunction and statistical significance set at á = 0.05 for all tests. All analysis was done with SPSS version 11.5. Approval for this study was obtained from University of Nigeria ethics committee.

Results: CKD patients showed significantly higher autonomic dysfunction than controls, in all the age groups. Disease duration showed significant correlations with autonomic dysfunction. Calcium phosphorous product and GFR showed linear correlations with autonomic dysfunction; however these were not statistically significant. Multiple regression analysis to determine the predictive symptoms of autonomic dysfunction among CKD patients showed that impotence ($p = 0.03$, OR = 0.02), postural dizziness ($p = 0.04$, OR = 8.39) and nocturnal diarrhea ($p = 0.02$, OR = 29.09) were the symptoms that most predicted the development of autonomic dysfunction in these patients.

Conclusion: In this study, autonomic dysfunction in pre dialysis CKD patients was not significantly affected by demographic factors. It was more in patients with longer disease duration, and more severe diseases. Pre dialysis CKD patients with impotence, postural dizziness and nocturnal diarrhea are more likely to have

positive autonomic dysfunction testsWe recommend that all patients with these symptoms be further assessed for autonomic dysfunction and adequate treatment instituted.

ABS/2011-GN08

PREVALENCE AND PATTERN OF AUTONOMIC DYSFUNCTION AMONG PRE DIALYSIS CHRONIC KIDNEY DISEASE (CKD) PATIENTS IN SOUTH EAST NIGERIA

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Background: Autonomic dysfunction has been shown as a significant independent risk factor for mortality among CKD patients. Little is known about autonomic dysfunction among CKD patients in sub-Saharan Africa. This study aims to determine the prevalence and pattern of autonomic dysfunction among CKD patients in the South East, Nigeria

Method: A cross sectional study conducted over a six month period (August 2005 – January 2006), was carried out at a tertiary university-affiliated teaching hospital in Nigeria, on pre dialysis CKD patients. Subjects without kidney failure were chosen randomly to serve as control. A questionnaire was administered to assess the symptoms and signs of autonomic dysfunction in the patients and control subjects. Autonomic dysfunction was determined using a battery of 5 non invasive cardiac autonomic function tests: Heart rate response (HRR) to standing, HRR to breathing, HRR to vasalva maneuver, resting tachycardia and blood pressure response to standing. Descriptive statistical analysis was performed using SPSS 11.5 software and statistical significance set at á = 0.05 for all tests. Approval for this study was obtained from University of Nigeria ethics committee

Results: Eighty patients were included in the study; 39 (48.75%) males and 41 (51.25%) females with a mean age of 42.1 years**.** Forty subjects were chosen: 21 (52.5%) males and 19 (47.5%) females with a mean age of 37.8 years Autonomic dysfunction was seen in 51.25% of the patients compared to 7.50% in the control group. Both sympathetic and parasympathetic dysfunctions were recorded in these patients.

Conclusion: Our study documented a high prevalence of autonomic dysfunction among pre dialysis CKD patients. Autonomic dysfunction in these patients presented in both sympathetic and parasympathetic patterns. Our recommendation is that autonomic function test should be carried out in CKD patients presenting for the first time in the outpatient clinic and appropriate management modalities instituted.

ABS/2011-GN09

PATTERN OF ACUTE KIDNEY INJURY IN LAGOS

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Background to Study: Acute Kidney Injury (AKI) is a serious disorder of kidney function associated with prolonged hospital stay and significant morbidity and mortality. The aetiologic spectrum of AKI differs significantly between developed and developing countries and is thought to closely mirror the socioeconomic

status of the community. Most cases AKI in developed countries are hospital-acquired and usually follow major surgical procedures or trauma. Whereas, in developing countries, most cases are community acquired with community acquired infections and obstetric complications being responsible for the majority of cases. In the last few years there has been improvement in level of education, awareness, economic status and access to healthcare in the general population in Nigeria hence the need to assess its impact, if any, on the pattern of AKI.

Methods: We reviewed the hospital records of all patients with a diagnosis of Acute Kidney Injury and Acute Renal Failure admitted into the Lagos University Teaching Hospital between the 1st of January 2009 and the 30th of September 2010. The information retrieved included, biodata, aetiology of AKI, results of laboratory investigations done on admission, whether dialysis was carried out and outcomes.

Results: The records of 54 patients were available for review. 27(50%) were male and 27(50%) were female. The mean age of the study population was 39.7yrs with 68.5% of the patients being younger than 50yrs of age. Sepsis was the aetiology of AKI in 52.1% of cases, obstructive uropathy in 14.6%, gastroenteritis in 10.4% and pre-eclampsia/eclampsia in 6.3%. Other causes were; toxic nephropathy (7.4%), post-surgery (5.6%), acute myocardial infarction, haemolytic uraemic syndrome and antepartum haemorrhage (1.9% each). 16.9% of the patients were admitted to the intensive care unit (ICU) while the remaining patients were managed on the open wards. Dialysis was indicated in 88.9% of the patients; however, dialysis was not carried out in 25% of these patients because they could not afford to pay for the procedure. In-hospital mortality was 29.6%. Overall, patients who died had a shorter mean duration of hospital stay [9.2days vs 33.9days ($P < 0.01$)], lower mean serum bicarbonate [19.5mmol/L vs 22.9mmmol/L ($P= 0.02$)], were more likely to be admitted unconscious [62.5% vs 26.3% ($P= 0.01$)] and more likely to have been admitted into the ICU [37.5% vs 7.9% ($P= 0.01$)]. Also, among patients in which dialysis was indicated, not having dialysis was associated with higher mortality [46.7% vs 15.2% ($P= 0.02$)]

Conclusion: The aetiologic spectrum of AKI in the study is similar to that reported from other developing countries and differs significantly from that reported from developed countries. Though the period of the study is much shorter than that of a similar study by Bamgboye et al in the same institution about 18years ago, the findings suggest a changing pattern of AKI seen at the Lagos University Teaching Hospital. Sepsis remains the commonest cause of AKI however in this study obstructive uropathy has replaced obstetric complications as the next most common cause. The reduction in the contribution of obstetric complications to the burden of AKI in Lagos may be a reflection of better access to obstetric care in the general population.

Keywords: *Acute Kidney Injury; Aetiology; In-hospital Mortality*

ABS/2011-GN10

PATTERN OF RENAL DISEASES IN NEWLY DIAGNOSED PATIENTS WITH HUMAN IMMUNODEFICIENCY VIRUS INFECTION AT THE UNIVERSITY COLLEGE HOSPITAL, IBADAN

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Background: The burden of kidney disease among HIV-infected patients is expected to rise as more patients are able to access anti retroviral therapy and as such live longer. Careful screening at first diagnosis may reveal patients with renal disease and help in the planning of holistic care before institution of ARVs.

Methods: A cross sectional study to determine the pattern of renal disease among newly diagnosed HIV patients. A small subset of those without renal disease was also studied to ascertain the risk factors for renal disease among the subjects.

Results: Of 1270 subjects screened for renal disease, 368 were found to have renal disease with a prevalence of 28.9%. Of this, 316(85.9% had proteinuria), 164(44.5%) had at least one electrolyte disorder, 46(12.5%) had acute kidney injury while 158(42.9%) had chronic kidney disease. When compared with 371 HIV positive subjects without kidney disease, logistic regression analysis showed that short duration of illness ($p<0.001$), use of herbal remedies ($p<0.001$), hypertension ($p=0.034$), low BMI (p0.032), low PCV ($p=0.003$) and low CD4 counts ($p<0.001$) were significantly associated with development of kidney disease.

Conclusion: Early screening and timely detection of renal disorders in ARV naïve patients is a clinical imperative for holistic care.

ABS/2011-GN11

KIDNEY FUNCTION AND TOTAL SERUM CHOLESTEROL LEVELS IN THE GENERAL POPULATION OF ADULT NIGERIANS: A COMMUNITY BASED STUDY

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Background: Chronic kidney disease (CKD) is associated with an increased risk of cardiovascular disease. Lipid abnormalities have been linked to the initiation and progression of CKD. In this cross sectional study, the relationship between the estimated glomerular filtration (eGFR) and total cholesterol was investigated.

Method: This community based health survey of adults 18 years and above in Maiduguri, investigated the residents of 3 randomly selected clusters of government owned housing estates. It is part of an ongoing ISN endorsed kidney disease early detection programme. Consenting individuals had an overnight fast before the collection of their blood samples. The glomerular filtration rate was estimated using the 4 variable MDRD equation while cholesterol levels were determined with Hitachi-Roche auto analyser.

Results: Data from six hundred and ninety-six individuals (m: f=1:1) with an average age of 36.8 years was analysed. The mean total cholesterol was 5.18mmol/L while 304 (43.6%) of the study population had total cholesterol levels of 5.2mmol/L or greater. The mean eGFR was 105.2mls/min/1.73m2 for the study population. The eGFR correlated inversely with the total cholesterol ($r = -0.369$) for the whole group. The mean eGFR of the subgroup with total cholesterol < 5.2mmol/L was 114.8 mls/min/1.73m2 in comparison to 93.1 mls/min/1.73m2 for those with total cholesterol =/> 5.2 mmol/L.

Conclusion: Risky levels of total serum cholesterol are common in the general population of Nigerians and therefore cholesterol tests should be routinely done in adults. Elevated serum cholesterol levels are associated with lower estimated GFRs in non institutionalized adult

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CHALLENGES IN THE MANAGEMENT OF A CHILD WITH END STAGE RENAL DISEASE: THE STORY OF A POOR NIGERIAN GIRL

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Background: End stage renal disease (ESRD) is on the rise among children in Nigeria. The cost of its management with renal replacement therapy is quite enormous for the average Nigerian family in view of the absence of NHIS support.

Objectives: To highlight the challenges encountered in the management of a Nigerian child with ESRD.

Methods: The case record of a 13year old girl with ESRD managed in our unit was reviewed with a view to bringing out the various odds encountered in the management.

Results: The social challenges encountered included inadequate fund for renal replacement therapy resulting in outsourcing of funds, abandonment/isolation of the child and irregular administration of renal replacement therapy.

Conclusion: The management of ESRD remains a challenge with the diagnosis almost like a death sentence.

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AMINOPHYLLINE IMPROVES URINE FLOW BUT NOT SURVIVAL IN CHILDHOOD OLIGOANURIC ACUTE KIDNEY INJURY.

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Conflicts of interest: *None to declare.*

Introduction and aims: In the injured kidney, adenosine is released endogenously causing vasoconstriction of the renal afferent arteriole via the adenosine A1 receptor as well as vasodilatation of the renal efferent arteriole via the adenosine A2 receptor thereby reducing the renal blood flow and glomerular perfusion pressure leading to ischaemic renal injury. Aminophylline is one agent that has been tried with the objective of achieving better acute kidney injury (AKI) outcome with variable results; it vasodilates the renal afferent arterioles through competitive inhibition of adenosine on the adenosine A1 receptor thereby improving renal blood flow, glomerular perfusion pressure and filtration. In this study, we determined the outcome of aminophylline treatment in childhood AKI.

Methods: This was a retrospective study of AKI patients treated with aminophylline and controls. The outcome indices that were determined comprised urine flow rate, oligoanuria duration (days), number progressing from one to the next severe AKI stage, number requiring dialysis, number dialyzed and mortality in the aminophylline arm and compared with non_aminophylline arm.

Results: The control (n=8) and aminophylline (n=9) arms mean ages were 4.56±2.68 and 4.882.14 years (p=0.726), respectively. All patients had Stage 3 AKI. Baseline median urine flows in the aminophylline 0.13 (0.000.45) and control arms 0.04 (0.000.43) mL/kg/h were similar, p=0.463. The median urine flow rates (mL/kg/h) increased significantly from days 5 (0.820 Vs 0.095; p=0.025), 6 (1.030 Vs 0.165; p=0.017), and 7 (1.23 Vs 0.215; p=0.025) in the aminophylline than in the control arm. Oligoanuria duration was 6 days in 7 aminophylline-treated patients compared to 2 in controls (77.8% Vs 25.0%; odds ratio 0.09; 95% CI: 0.010.89; p=0.035). Four of 5 controls were dialyzed compared to only one of 8 aminophylline-treated patients (odds ratio 0.16; 95% CI: 0.040.71; p=0.031). The aminophylline arm maintained a relatively constant serum creatinine level compared to controls who showed progressive and statistically significant increases in Scr. Mortalities were similar in both aminophylline-treated and control patients (3 Vs 2; hazard ratio 0.77; 95% CI: 0.115.45; p=0.791).

Conclusions: Aminophylline therapy was significantly associated with improved urine flow rate and reduced number of dialyzed patients but had no positive impact on childhood AKI survival.

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ACUTE CHILDHOOD CARDIORENAL SYNDROME AND IMPACT OF CARDIOVASCULAR MORBIDITY ON SURVIVAL

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Conflicts of interest: *None to declare.*

Background and aims: Cardiorenal syndrome (CRS) is a recognized morbidity and mortality multiplier in critically ill children. While a lot of data have been published on chronic kidney disease as risk factor for cardiovascular morbidity and mortality in both children and adults there is paucity of specific data on acute cardiac dysfunction (ACD) leading to acute kidney injury and vice versa in children especially; in this study, an attempt was made to determine the prevalence, aetiology, clinical types of CRS and impact of acute cardiovascular morbidity on childhood acute kidney dysfunction (AKD) outcome.

Methods: This was a retrospective case–control study of childhood AKD and ACD .

Results: Forty seven of 101 (46.53%) patients with AKD had CRS. Median age was 4.0 (0.3–14.5) years. Majority were <6 years old (70.21%). Types 3 and 5 CRS were found in 10 and 37 patients, respectively. Type 3 CRS was due to acute glomerulonephritis (AG N; n=7), captopril (n=1), frusemide (n=1), and hypovolaemia (n=1). Malaria–associated haemoglobinuria (n= 20), septicaemia (n= 11), lupus nephritis (n= 3), tumour lysis syndrome (n= 2) and acute lymphoblastic leukaemia (n= 1) caused Type 5 CRS. The cumulative mortality in hypertensive CRS was similar to non–hypertensive CRS (51.4% Vs 40.9%; p = 0.119). Mortality in CRS and non–CRS was similar (45.7% Vs 24.5%; p= 0.053). Type 5 survived better than Type 3 CRS (66.7% Vs 12.5%; p= 0.001). Risk factors for mortality were Type 3 CRS (p=0.001), AGN–associated CRS (p=0.023), dialysis requiring CRS (p=0.008) and heart failure not associated with anaemia (p=0.003). All–cause–mortality was 34.2%.

Conclusion: CRS was a very common event with high mortality rate in critically ill children. Preventive measures aimed at some of the preventable CRS aetiologies might be critical to reducing its prevalence.

CLINICAL PRESENTATION AND OUTCOME OF AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE: A PROSPECTIVE FOLLOW-UP STUDY

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Background: Autosomal dominant polycystic kidney disease (ADPKD) is the commonest form of genetically inherited kidney disease with sparse literature in our setting. The disease affects about one person per thousand. It is an important cause of renal failure, accounting for 10-15% patients who receive haemodialysis.

Aim & Objectives:

1. To determine the pattern of clinical presentation and outcome of Autosomal Dominant Polycystic Kidney Disease (ADPKD).
2. To determine the factors (if any) that portend worse outcome.

Patients and Methods: All patients that satisfied the inclusion criteria were prospectively followed up over a 15 year period (January 1996 - December 2010) at the Nephrology clinic, Obafemi Awolowo University Teaching Hospital, Ile-Ife. The clinical diagnostic criteria used included;

1. Ultrasonographic evidence of 2 or more cysts in both kidneys,
2. Family history of kidney disease,
3. Presence of hypertension, anaemia, cardiac or renal failure or cerebrovascular disease.
4. Patients must not have had haemodialysis.

Patients that satisfied criteria 1 and any of the other 2 were diagnosed to have ADPKD.

The patients were taken through thorough clinical and laboratory evaluation to assess presenting complaints, family history of ADPKD, any palpable mass on abdominal examination, cardiac examination for any abnormal finding and other complications. Laboratory parameters assessed included, serum chemistry and haematologic parameters while the imaging tests included abdominal and renal ultrasonography, echocardiography and cranial computerised tomography scan of magnetic resonance imaging. Data was analysed using SPSS statistical software version 13.

Results: A total of 41 patients fulfilled the diagnostic criteria. They included 23 (56.1%) males and 18 (43.9%) females with a male:female ratio of 1.3:1. The median (range) age at the time of diagnosis of ADPKD was 44.00 (18-80) years. Median (range) follow up period for all patients was 24 (0.25-84) months. Most common form of presentation was hypertension in 40 (97.6%), nocturia in 32(78%) and loin pain in 28(68.3%) patients. Kidneys were palpable in 34 (82.9%), liver in 4 (9.8%) and spleen in 1 patient (2.4%). Haematuria was present in 19 (46.3%) patients. Thirty five (85.4%) patients had left ventricular hypertrophy though only 10 had aortic regurgitation that was confirmed by transthoracic echocardiography. On MRI 2(4.9%) had intra-cerebral aneurysm while 6(14.6%) patients were discovered to have aneurysm and intra-cerebral bleeding at autopsy. The mean creatinine clearance at presentation was 34.2±23.6 (range 1-84) mls/min. Twenty-three (56.1%) patients received haemodialysis while 3(7.3%) had peritoneal dialysis. Five patients were dialysis dependent at the end of follow-up. Twenty-one patients (51.2%) died during the follow up period. Uraemia was the commonest cause of death and hence portend worse prognosis.

Conclusion: ADPKD is increasingly being recognised in our setting with improvement in diagnostic facilities. Hypertension remains the commonest form mode of presentation with majority of patients presenting between 30and 60yrs. ESRD was found to be the commonest cause of mortality followed by intracerebral haemorrhage.

HEALTH RELATED QUALITY OF LIFE IN MAINTENANCE HAEMODIALYSIS PATIENTS: COMPARISON OF PERFORMANCE OF KARNOFSKY PERFORMANCE STATUS SCALE (KPSS), 36-ITEM SHORT FORM HEALTH SURVEY (SF-36 HEALTH SURVEY) AND KIDNEY DISEASE QUESTIONNAIRE (KDQ)

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Background: Assessment of health related quality of life (HRQOL) has become a vital quality control tool in the monitoring of treatment outcomes in different disease states. With prolongation of the life of end stage renal disease (ESRD) patients, it has become imperative to assess the quality of life achieved. Several instruments are available for assessing HRQOL, while some are physician dependent, others are patient centred and while some are generic, others are disease specific. In this cross sectional study we set out to compare the performance of 3 different instruments used in the assessment of HRQOL namely Karnofsky performance status scale (KPSS), 36-Item Short Form Health Survey (SF-36 Health Survey) and Kidney disease questionnaire (KDQ) in our maintenance haemodialysis population.

Methodology: We recruited 41 patients with End Stage Renal Disease (ESRD) after an informed consent. The socio-demographic, clinical and laboratory data were assessed using a structured questionnaire while the HRQOL was assessed with the aid of 3 instruments namely Karnofsky performance status scale (KPSS), SF-36 Health Survey (SF-36) and Kidney disease questionnaire (KDQ). Dialysis adequacy was assessed using single pool kt/v derived from second generation logarithmic equation (Daugirdas et al) while standard kt/v was estimated using Leypoldt Fixed-volume equation. Data was analysed using SPSS package version 16.

Results: The mean (±SD) age was 49.6(±16.5) years with a slight male preponderance (58.5%). Thirty-one patients (75.6%) were on twice weekly HD sessions while the remaining 10 (24.4%) had thrice weekly sessions. The median duration on HD treatment was 12 (range; 4 -110) months. Fourteen (34.1%) patients had native arterio-venous fistula as dialysis access, while subclavian, jugular and femoral venous accesses were used in 3 (7.3%), 5 (12.2%) and 19 (46.3%) patients respectively. The median serum creatinine, urea, total protein, albumin, and packed cell volume were 742.6 (range; 203.3– 1980.2) umol/L, 43.9 (range; 9.9 – 96.4)mmol/L, 62.5 (range; 34 –84) g/L mmHg, 33.5 (range; 17 –43) g/L and 25 (range; 17 –42)% respectively. The median percentage reduction in urea (PRU), single-pool kt/v and standard kt/v were 57 (range; 22– 71)%,1.0 (range; 0.4 – 1.5) and 1.26 (range; 0.58 –2.27) respectively. The median scores for the 3 HRQOL instruments are as follows; KPSS 80 (range; 40-100), the eight SF-36 domains were Physical functioning 50 (range; 0– 95), Role – physical 25 (range; 0-100), Bodily Pain 62 (range; 0– 100), General Health 42 (range; 15– 87), vitality 50 (range; 15– 90), Social Functioning 37.5 (range; 0– 100), Role – Emotional 66.7 (range; 0– 100), and Mental Health 72 (range; 32– 100). The median scores for KDQ were SF-12 physical 35.7 (range;17.0-56.7) and SF-12 mental 49.0 (range; 29.4 - 60.7). There was a good correlation between the 3 HRQOL scales. KPSS correlated with the 7 out of 8 SF- 36 domains with r values ranging between 0.383 and 0.628 and corresponding p values of 0.013 to <0.0001. It also correlated positively with the with physical (r=0.440, p=0.004) and mental (r=0.491, p=0.001) domains of KDQ. The physical and mental health domains of KDQ also correlated with 8 SF 36 domains with the ranges of 'r' and 'p' values of 0.353- 0.717 and 0.024 - <0.0001 for physical health and 0.480- 0.756 and 0.003 - <0.0001 for mental health respectively. There was good correlations between frequency of HD per week, packed cell volume, total serum protein, albumin as well as standard kt/v and the different components of the 3 HRQOL scales. On ease of applicability and interpretation KPSS is the simplest while SF-36 is the most complex but assesses both physical and mental health domains.

Conclusion: KPSS, SF-36 Health Survey and KDQ are reliable instruments for assessing HRQOL with excellent agreement between them. KPSS though physician dependent, is simple to apply and correlated with the mental health domains of SF-36 and KDQ.

IS THERE ANY RELATIONSHIP BETWEEN CHRONIC KIDNEY DISEASE (CKD) AND TUBULAR DYSFUNCTION IN ADULT SICKLE CELL DISEASE (SCD) PATIENTS IN STEADY STATE.

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Background: Chronic kidney disease (CKD) is common in adults with Sickle Cell Disease (SCD) and contributes significantly to morbidity and mortality. Glomerular and tubular dysfunctions are major manifestations leading to CKD. While tubular abnormalities manifest in children and early adulthood, glomerular diseases occur later in adulthood and progresses inexorably to end stage renal disease (ESRD). In this cross sectional study we assessed prevalence of CKD and abnormalities in tubular function in adult SCD patients in steady state and determine whether any relationship(s) exist between them.

Methodology: Seventy-nine adult SCD patients in steady state were recruited after an informed consent. They were taken through socio-demographic, clinical and laboratory evaluation and derived data recorded. Microalbuminuria was assessed in urinary dipstick negative patients while 24-Hour urine protein excretion was determined positive ones. 24 Hour urine was also used to assess fractional excretion of sodium (FeNa), fractional excretion of potassium(FeK), specific gravity and pH. Glomerular filtration rate (GFR) was estimated using Cockroft & Gault equation. CKD was defined as the presence of one or more of the following: (i). Reduced GFR <60mls / min, (ii) proteinuria and (iii) microalbuminuria. Data was analysed using SPSS package version 16.

Results: The age of the patients ranged between 18 and 56 years (median; 25 years) with a female preponderance (58.2%). Duration of management for SCD ranged between 6 and 46 years (mean ± SD; 22.5± 8.3).The Hb genotype was SS in 65 (82.3%) and SC in 14 (17.7%) patients. Sixty-eight patients (86.1%) had d" 2 vaso-occlusive crises per year while the remaining had >2. The mean (±SD) for serum creatinine, urea, sodium, and potassium were 88.9 (±17.3) µmol/L, 3.8 (±1.3) mmol/L, 137.0 (±2.0) mmol/L and 4.3 (±0.42) mmol/L respectively while the mean (±SD) haemoglobin concentration, WBC and platelet counts were 8.1 (±1.8) g/L, 9648.1 (±3523.3) / mm^3 and 299251.9 (±142075.0) / mm^3 respectively. The estimated GFR ranged between 33.7 and 188.8 (median; 68.2) mls/min, 81% had GFR < 100mls /min but only 5.1% had GFR > 120mls/min. The median (range) FeNa and FeK were 6.12(0.54 – 11.8)% and 30.5(3.8 – 55.9)% respectively with 98.7% of studied patients having markedly elevated levels of both. The median (range) of pH and specific gravity were 5.5(5.0 – 7.5) and 1.020(1.000 – 1.030) respectively. There was no proteinuria in 59(74.7%) patients while microalbuminuria and overt proteinuria were found in 12(15.2%) and 8(10.1%) patients respectively, 36 (45.6%) of the patients had CKD. Those with CKD had significantly lower BMI ($p<0.0001$)) and Hb ($p=0.004$) while their SG, FeNa and FeK were significantly higher with corresponding p values of 0.005, 0.048 and 0.019 respectively.

Conclusion: There exist marked tubular dysfunction in most studied patients but it was exaggerated or worse in those with CKD. Tubular defects may contribute to the magnitude and progression of CKD in adult SCD patients.

PRECIPITANTS OF ACUTE DECOMPENSATION IN PATIENTS WITH CHRONIC RENAL FAILURE: A PROSPECTIVE STUDY

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Background: The prevalence of chronic kidney disease (CKD) has assumed epidemic proportions in both developing and developed countries. It often present acutely with attendant high morbidity and mortality particularly in sub- Saharan Africa. Management of the precipitants of acute decompensation would assist in reducing morbidity and mortality hence our decision to assess the causes of acute decompensation in our CKD patients.

Methodology: One hundred and sixty-three CKD patients that presented acutely with uraemic symptoms were recruited. They were taken through history, clinical examination and laboratory investigations which included complete blood count, serum chemistry as well as blood and urine culture where indicated. They also had imaging tests which included renal ultrasonography and two dimensional and doppler echocardiography. Data was analysed using SPSS package version 16.

Results: The age range was 15-85years (Mean ± SD; 41.9±16.7years) with male preponderance (125 males, 76.7%). The commonest aetiologic factors included chronic glomerulonephritis (52.8%), hypertension (28.2%) and diabetes mellitus(9.2%). The common causes of acute deterioration in renal function identified were congestive cardiac failure (41.7%), malignant phase hypertension (39.9%), infections (35.6%) and nephrotoxins (20.9%) out of which majority were herbal remedies. The prevalence of systolic heart failure was 16.4% while diastolic heart failure was 62.5%. The commonest foci of infection were urinary tract and chest while the common isolates were Escherichia coli (42.9%) and Staph aureus (21.4%). More than 50% of the patients had either grade 3 or 4 hypertensive retinopathy on fundoscopy. Renal replacement therapy offered was haemodialysis and 86 (52.7%) of the patients were discharged on conservative treatment after a mean (±SD) of 3.95 (±2.09) sessions of HD and remained stable for 1-12 (Mean ±SD; 3.19±2.32) months. Of the 61 deaths recorded 30(49.2%) occurred within first 2 weeks of presentation. Major causes of death were uraemia and acute pulmonary oedema.

Conclusion: The common causes of acute decompensation of CKD were congestive cardiac failure, malignant phase hypertension, infections and nephrotoxins. More than half of such patients could be sustained after initial salvage dialysis sessions hence aggressive management of these acute complications in CKD could be lifesaving.