

**NANCONF 2014 OWO BOOK OF ABSTRACTS**

**ORAL PRESENTATIONS:**

**1. CKD/CVS/2014-01**

RELATIONSHIP BETWEEN METABOLIC SYNDROME AND NEPHROPATHY IN TYPE 2 DIABETICS

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**INTRODUCTION:** The metabolic syndrome is a cluster of cardiovascular risk factors, which include dyslipidaemia, obesity, hypertension, and abnormal glycaemia. Its presence in patients with CKD has been linked to a higher rate of progression to ESRD.

**OBJECTIVES:** We set out to determine presence of the metabolic syndrome and association between its components and nephropathy in established type 2 diabetics.

**METHODOLOGY:** This is a descriptive, cross-sectional study. Forty patients with clinical Diabetic Nephropathy were screened for the metabolic syndrome using the NCEP-ATP III criteria. Data was analyzed using SPSS 19.

**RESULTS:** Their mean age was 58.05(±6.10) years. The duration of DM was 9.55(±4.1) years. Median protein excretion was 0.55g/day (range 0.1-6.4g/day). Mean

estimated GFR was 50.19(±17.87) ml/min/1.73m<sup>2</sup> (CKD-EPI).

The metabolic syndrome was present in fourteen (35%) subjects. Of these, 12 (85.7%) were females. Twenty eight (70%) had hypertension. Mean (± SD) SBP and DBP were 142 (± 24) mmHg and 84 (± 13) mmHg respectively. All the patients had central obesity using their waist circumference. The mean BMI (±SD) was 25.76 (± 3.50) kg/m<sup>2</sup>. Fifty percent of subjects had BMI above normal limits. Their mean plasma triglyceride and HDL were 1.28 (±0.57) mmol/L and 1.47 (±0.56) mmol/L respectively. Mean atherogenic index of plasma (AIP) was 0.26 ± 0.18. Thirty two had elevated AIP, out of whom twenty (62.5%) had increased risk for CVD.

The mean HbA1c was 9.51(±2.60)%. Thirty one (77.5%) had poor glycaemic control (HbA1c > 7%).

There was significant correlation (p < 0.05) between BMI and daily protein excretion, SBP and serum creatinine as well as between DBP and serum creatinine.

**CONCLUSION:** Occurrence of the metabolic syndrome is high in type 2 DM and more common among female subjects. Obesity was the most common metabolic syndrome component. The BMI and hypertension bore significant relationship with markers of CKD.

## 2. CKD/CVS/2014-02

### RISK FACTORS FOR CHRONIC KIDNEY DISEASE IN UYO URBAN.

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**Background:** The prevalence of chronic kidney disease is increasing the world over and it is now regarded as a public health problem. In UK, its estimated to have reach 100 new patients per million population, this expected to rise at annual rate of 5-8%. In the USA, 11% of the general adult population have chronic kidney. While in Nigeria it remained largely unknown. Hospital based data on the prevalence of kidney disease in Nigeria show a prevalence of 2 – 8 %. However, emerging community studies show a prevalence of 10% to 19.9%.

The number of people at increased risk of developing or having undiagnosed chronic kidney disease, especially those with diabetes or hypertension, has risen over the years and this is expected to continue. In the past there has not been a real focus on management and prevention of CKD, with the prevalence remaining largely unknown. Considering the burden of management of end-stage kidney disease, early detection of risk factors and management of chronic kidney disease may delay or even haul the progression to end stage kidney.

**Subjects and Method:** The study was conducted during the 2013 world kidney day activities in Uyo, Akwalbom State of Nigeria. Uyo urban comprises of Uyo, part of Itu and Urau local Government areas with estimated population of 554,906 people according to 2006 Nigerian Census.

Adequate sensitization of members of the public was ensured through Radio announcement and live Television

programs. Trained Nurses of the Dialysis unit were recruited for the exercise.

A well structured questionnaire was used to collect demographic data such as age and sex .Past and present medical history. Subjects had their blood pressure (BP), blood sugar, urinalysis, serum creatinine measured. Weight, height, and Body Mass Index (BMI) were also checked.

#### Results:

Five hundred and two adults (70.6% females and 29.4% males) aged 18 – 78 years and living in urban areas participated in the study. A family history of chronic kidney disease was found in 4.3% of the study participants.

The risk factors for chronic kidney disease investigated in this population included hypertension, diabetes mellitus, obesity (and overweight), proteinuria and haematuria.

The prevalence of hypertension in this population was 30.16% (95%CI 26.14 – 34.18%). Only 12.58% (95%CI 9.54 – 15.61%) were aware of their positive hypertension status. The female population had a hypertension prevalence of 28.5% (95%CI 23.7% - 33.2%) compared to the male population, 33.8% (95%CI 26.1 – 41.5%),  $p = 0.23$ .

There was an increasing trend in the proportion of individuals who were hypertensive in each age group ( $p = 0.03$ ).

The independent predictors of hypertension in this cohort were age and BMI. There was a 7.7% (95%CI 4.6% - 11%) increased likelihood of being hypertensive for every one year increase in age after adjusting for gender, BMI, waist circumference and

presence of hematuria or proteinuria. The proportion of those with diabetes mellitus in the study population was 5.8% (95%CI 3.7 – 7.8%).

There were 31.8% (95% CI 27.7 – 36.0%) obese individuals (16.8% among males versus 38.1% among females,  $p < 0.001$ ). Males with high waist circumference were significantly fewer than their female counterpart (50% versus 72.7

Proteinuria was found in 23.5% (95% CI 19.8% - 27.2%) while Hematuria, on the other hand, was present in 3.0%

Conclusion: There is a high prevalence of risk factors for chronic kidney disease in our population. Therefore screening for early detection should be encouraged.

### 3. CKD/CVS/2014-03

Clinico-pathology of Nephropathy in Nigerian patients with type II Diabetes Mellitus.

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**Background:** Diabetes mellitus has become a global epidemic with attendant increase in its chronic complications such as Diabetic Nephropathy. There are very limited studies on Diabetic Nephropathy in this environment. This research aimed to study the renal function in Nigerian patients with type 2 diabetes mellitus and determine its relationship with the renal histopathology.

**Method:** This is a descriptive, cross-sectional study. Consecutive patients were screened for suspected Diabetic Nephropathy. Forty patients with clinical Diabetic Nephropathy underwent renal biopsy. Data was analyzed using SPSS 19.

**Results:** One hundred and eighty three type 2 diabetic patients were screened. Eighty eight (48.1%) had Clinical Diabetic Nephropathy with a M:F ratio of 1.2:1. However, forty patients consented to kidney biopsy. Data on these were further analyzed. Their mean age and duration of DM were 58.05( $\pm 6.10$ ) years and 9.55( $\pm 4.1$ ) years respectively while 28 (70%) had associated hypertension. The mean HbA1c was 9.51( $\pm 2.60$ )% while median protein excretion was 0.55g/day (range 0.1-6.4g/day) and mean GFR was 50.19 ( $\pm 17.87$ )ml/min/1.73m<sup>2</sup>.

Sixty percent of the subjects had moderate to severe histopathological abnormalities. GBM thickening (97.5%), interstitial fibrosis (72.5%), interstitial inflammation (70%), arterial hyalinosis (67.5%) and diffuse glomerulosclerosis (62.5%) were the most common histological changes. Only 15% of the subjects had the Kimmelstiel-Wilson nodules.

SBP, DBP, daily protein excretion and MABP correlated positively with the total histopathological scores while the eGFR correlated negatively. Multiple regression analysis showed that SBP, DBP and proteinuria were predictive of renal histopathological changes.

**Conclusion:** There is a high prevalence of DN among type 2 diabetics studied. Glomerular basement membrane thickening, hyaline arteriosclerosis and diffuse glomerulosclerosis were the most

common histological changes. SBP, DBP and proteinuria were predictive of renal histopathological changes.

#### **4. CKD/CVS/2014-04**

##### **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 keeps rising and 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.

#### **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 in them. 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:**

The age range of the participants was between 23 and 65 years. The mean ages of CKD patients and controls were similar ( $49.24 \pm 15.95$  and  $49.72 \pm 16.05$  years respectively,  $p < 0.05$ ). Carotid intima media thickness (CIMT) was significantly increased in CKD patients compared with the control group with mean values being  $1.1 \pm 0.38$  mm and  $1.1 \pm 0.43$  mm on the right and left sides in the CKD patients respectively compared with  $0.70 \pm 0.10$  mm and  $0.70 \pm 0.11$  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 with the aim of intervening early to prevent cardiovascular disease and hence, retard the progression of kidney disease in this group of patients.

## **5. CKD/NTA/2014-01**

Relationship between Nurses' care-giving burden and renal patients' perception of quality of nursing care in two health Institutions in Ondo state, Nigeria.

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The incidence of renal disease is now on the increase either as complication of ailments or primary disorder of the kidney in Nigeria, thus increasing the care-giving burden involved in care of such patients.

This study identified the care-giving burden, factors associated with burden experienced by nurses and determined patients' perception of the quality of nursing care received.

A Sample of 240 nurses and 60 renal patients were selected from two health institutions in southwestern Nigeria. Three instruments used for data collection were Zarith Burden of life Interview guide (ZBI), Patients' Perception of Hospital Experience with Nurses (PPHEN) and Caring Behavior Assessment tool (CBI). Data were analyzed using descriptive and inferential statistics.

The results revealed that the procedures that pose burden to Nurses' care-giving in decreasing order were: haemodialysis, Peritoneal dialysis, and care of dialysis access Factors identified as responsible for care-giving burden were shortage of staff, financial constraint of patients, difficulty in getting donor for transplant and erratic power supply. Higher percentage of the nurses experienced mild to moderate burden, all the patients had high level of expected care in contrast to the low percentage with the actual observed care. There was no significant association between the nurses' care-giving burden and perceived quality of care received by renal patients.

The study concluded that renal patients perceived nursing care to be of poor quality in the southwestern Nigeria.

## **ORAL PRESENTATIONS:**

### **SCIENTIFIC SESSION 2**

#### **1. CKD/NTA/2014-02**

HAEMODIALYSIS IN CHILDREN:  
UNIVERSITY COLLEGE HOSPITAL,  
IBADAN EXPERIENCE

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**Background:** Haemodialysis is an option of renal replacement therapy especially for bigger children and adolescent, although dialysis is seen only as an alternate option of renal transplantation as this allows the

best chance of rehabilitation in terms of educational and psychosocial functioning.

Most haemodialysis Centres in Nigeria dialyze only adult patients while a few carry out haemodialysis in children.

**Aims and objectives:** The aim of this study is to describe the demographic features and outcome of all children with renal failure who had haemodialysis at UCH, Ibadan.

**Methodology:** A retrospective review of children with renal failure who had haemodialysis done at UCH, Ibadan during the period between January 2010 and November 2013.

**Result:** Out of 94 children who were on haemodialysis; 50(53.2%) were male, 44(46.8%) were female. 69 children (73.4%) had CKD while 25(26.6%) had ARF. The commonest cause of CRF was glomerulonephritis which accounted for 43% which occurred in 40 children; 15 (16%) had ARF as a result of sepsis and 6 (6.4%) as a result of severe malaria.

More than 80% of the children died due to financial constraints.

**Conclusions:** The most common cause of CRF and ARF in children was glomerulonephritis and sepsis respectively which is a preventable cause and can be managed promptly when detected early.

**Keywords:** children, Haemodialysis, Renal failure and infection.

## 2. CKD/NTA/2014-03

A SINGLE-CENTER 2-YEAR EXPERIENCE WITH HAEMODIALYSIS CARE IN NORTH CENTRAL NIGERIA.

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## Background

In Nigeria, Patients with End stage renal disease face many obstacles such as lack of access to Dialysis, transplantation centers, non affordability of kidney transplant or lack of donor. Therefore, majority of these patients are left with the choice of haemodialysis for survival. However, the high cost of haemodialysis has made survival difficult for patients with end-stage renal disease in Nigeria.

In this study, we attempt to share our experience with challenges associated with providing maintenance haemodialysis in Niger State, North Central Nigeria.

## Methods

This is a retrospective study. We reviewed records of all patients who had haemodialysis at our dialysis facility over a period of 24 months. Data retrieved from the records include Age of the patients, gender, aetiology of Chronic Kidney Disease, types of vascular access for dialysis, frequency of haemodialysis, history of blood transfusion, Packed cell volume, frequency of dialysis and patients outcome.

Data obtained were analyzed using statistical package for social sciences (SPSS) version 21.

## Results

Fifty eight patients were enrolled for maintenance haemodialysis of our unit during the period of review. There were 36

males (62.1%) and 22 females (36.7%) with a mean age of 41.8 ( $\pm 17.5$ ) years. The commonest causes of end-stage renal disease were chronic glomerulonephritis (32.8%), hypertension (29.3%) and diabetes mellitus (15.5%). Majority of the patients 47 (81.1%) were dialyzed via femoral cannulation, while 8 (13.8%) and 3 (5.2%) received dialysis through tunneled internal jugular catheter and A-V fistula respectively. Only 1 (1.7%) of the patients had thrice weekly dialysis, 15 (25.9%) dialyzed twice weekly, 20 (34.5%) once in two weeks and 22 (37.9%) once weekly. The mean Packed cell volume (PCV) at the time of commencing dialysis was 21.6 ( $\pm 6.7$ )%, with majority of the patients 42 (77.4%) receiving blood transfusion. At the time of review, majority of the patients 41 (71.9%) had died, while 13 (22.8%) were alive and 3 (5.0%) have had kidney transplant.

### Conclusions

Majority of our patients could not achieve thrice weekly haemodialysis which is likely accountable for high mortality in this study. These findings highlight the need for good health care facilities, and the health care funding strategies for patients with End Stage renal disease in Nigeria.

### 3. CKD/PM/2014-01

Incident Haemodialysis at the University of Calabar Teaching Hospital: A preliminary report  
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### Introduction

Haemodialysis is the most commonly prescribed form of renal replacement therapy in Nigeria. With a progressively rising incidence of kidney disease in Nigeria, many more people are likely to need the treatment acutely and chronically. Yet this service is not as widely available as expected. In Calabar, the service has only become available over the past 9 months. We present here a preliminary report of incident haemodialysis patients over the period.

### Methods

This was a retrospective study of patients with advanced chronic kidney disease and Severe Acute Kidney Injury requiring haemodialysis at the University of Calabar Teaching Hospital over a nine month period. Data was extracted from medical records into a structured excel spreadsheet and was analyzed using STATA statistical package version 10. Results are presented as percentages and means with standard deviation.

### Results

There were 28 patients in all who had a total of 110 dialysis sessions. Of these, 18 were males while 10 were females. The mean age was  $48.4 \pm 18$  years. The renal diagnoses included Acute kidney injury 9 (33.3%) and chronic kidney disease 18 (66%). Of those with CKD, the majority had chronic glomerulonephritis 6 (22%) and hypertension 5 (18%). The remainder had Diabetic Nephropathy and obstructive uropathy. Vascular access was predominantly via the femoral and peripheral veins. The mean creatinine level at initiation of dialysis was 531.6

$\pm 196\mu\text{mol/l}$ , bicarbonate  $15.8\pm 3.2\text{mmol/l}$ , haematocrit  $23.9\pm 0.06\%$  and eGFR  $13.0\pm 4.9\text{ml/min}$ . All the AKI patients experienced full recovery of renal function. Intradialysis events were few and included clinical events like hypotension, hypoglycemia and non-clinical ones such as power failure.

## Conclusions

We conclude that the profile of our incident dialysis patients reflects a similar trend countrywide although they appear older with near similar number of hypertensives and diabetics.

### 4. CKD/PM/2014-02

Pattern of Haemodialysis Access Use at the University College Hospital, Ibadan.

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**Background:** Haemodialysis is a life saving modality of treatments for renal failure, though haemodialysis facilities are now available in most parts of the country most patients could not afford the services. Haemodialysis access is a major determinant of survival in patients on maintenance haemodialysis, ideal haemodialysis access for patients with end stage renal disease is arteriovenous fistula. Several organizations including fistula first initiatives have been in the forefront of creating awareness and educating the nephrology community on the importance and advantages of arteriovenous fistula over other forms of haemodialysis access. We review the records of all patients

dialyzed at the University College Hospital Ibadan with the aim of determining the pattern of haemodialysis accesses in use.

## Methods

In this retrospective study we reviewed the dialysis centre records of all patients that were dialyzed at the University College Hospital Ibadan between January 2008 and December 2012.

**Results:** A total of 1064 patients were dialyzed over the period under review, 634 (59.6%) males and 429 (40.4%) females. A total of 10,978 dialysis sessions were offered with an average of 10.3 sessions per patient. Acute renal failure (ARF) was the indication for dialysis in 206 (19.4%) while chronic renal failure (CRF) was responsible in 858 (80.6%). The haemodialysis accesses used among patients with ARF include one femoral vein and one peripheral vein in 175 (85%) patients, 21 (10.2%) used double femoral cannulations and 10 (4.8%) non-tunneled jugular catheter placements. Among patients with CRF 693 (80.8%) dialyzed with a femoral catheter and a peripheral vein cannulation, 58 (6.8%) had double femoral vein cannulations, 62 (7.2%) used non-tunneled internal jugular vein catheter, 22 (2.6%) used tunneled internal jugular vein catheter, 6 (0.7%) were dialyzed with subclavian vein catheter and 5 (0.6%) with arteriovenous graft while 17 (2%) used arteriovenous fistula as access for haemodialysis.

**Conclusion:** Femoral vein cannulation remains the commonest form of haemodialysis access among patients with chronic renal failure at the University College Hospital Ibadan, while only a few



proportion of the patients used tunneled internal jugular catheter, arteriovenous graft and fistula. Efforts should be made to ensure that impediments against the use of arteriovenous fistula are removed through introduction of subsidy for the procedure, education of patients with advanced CKD on the benefits of arteriovenous fistula and training and retraining of more vascular surgeons, urologists and interventional nephrologists in the art of arteriovenous fistula creation

#### 5. CKD/PM/2014-03

THE IMPACT OF GOVERNMENT SUBSIDY ON ERYTHROPOEITIN AND HAEMODIALYSIS ON THE HAEMOGRAM AND FREQUENCY OF BLOOD TRANSFUSION IN CKD PATIENTS UNDERGOING HEMODIALYSIS AT THE RENAL UNIT OF DELTA STATE UNIVERSITY TEACHING HOSPITAL, OGHARA.

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#### INTRODUCTION:

Anaemia is a common complication of CKD and worsens with deterioration in renal function. recombinant erythropoietin (EPO) has been the most important advancement in the treatment of the anaemia.

Although, the initial aim of treating anaemia in CKD with EPO was to prevent blood transfusion, several observational studies have also demonstrated associations between anaemia and worse outcomes such as mortality and cardiovascular complications like left ventricular hypertrophy.

Conventionally, the HB target in CKD is 10-12g/dl, however, except in the presence of compelling indication, blood transfusion is reserved till HB level of less than 7g/dl. The Delta state govt on 13th june 2013 subsidized the cost of haemodialysis and erythropoietin from #20,000 to #5,000 and #7,500 to #2,000 respectively for all delta state indigenes with chronic kidney disease requiring haemodialysis.

#### AIM AND OBJECTIVES:

- 1) Assess effect of subsidy on EPO and HD level of ESRD patients undergoing HD.
- 2) Determine the change in frequency of blood transfusion following government subsidy on EPO and haemodialysis.

#### METHODOLOGY:

Retrospective observational study of patients undergoing HD at the renal unit of delsouth, oghara from december 13, 2012 to june 12, 2013 (6months before commencement of subsidy) and from june 13 to december 12, 2013 (6months after subsidy) using 20 patients and the total number of hd sessions in the studied period.

#### RESULTS:

Average HB was 8.5g/dl+ 1.8 and 7.5g/dl+ 1.4 for post and pre subsidy intervention respectively while the frequency of blood transfusion was 16.8% and 35.2% for post and pre subsidy intervention respectively.

#### CONCLUSION:

The study showed that delta state govt subsidy on erythropoietin and homodialysis increased the average haemogram of the studied population and significantly reduced the frequency of blood transfusion

in CKD patients undergoing haemodialysis in **Delsuth, Oghara**.

## ORAL PRESENTATIONS:

### SCIENTIFIC SESSION 3

#### 1. CKD/PM/2014-04

Screening for risk factors for Chronic Kidney Disease in an unselected population of Nigerians.

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**Background:** Chronic kidney disease (CKD) remains a global public health challenge and is now assuming epidemic proportion. To be able to curtail this epidemic, community-based prevention is imperative. We carried out screening for some risk factors of CKD in volunteers after public enlightenment and sensitization programs with the aim of detecting (if any) the presence of proteinuria, hypertension and obesity.

**Methodology:** We conducted free medical screening in Ile-Ife and Ede on the World Kidney / World Stroke Day. Participants were taken through blood pressure check, weight and height assessments. Urinalysis was performed using medi-test Combi 9 (Macherey Nagel, Germany) test strips and data analysed using SPSS package version 16.

**Results:** A total of 1195 participants were screened. The age range was 14-96yrs (mean $\pm$ SD; 47.85 $\pm$ 15.12) with female preponderance (59.6%). The mean ( $\pm$ SD),

SBP, DBP and MABP were 124( $\pm$ 21.9)mmHg, 76( $\pm$ 12.7)mmHg and 92.4( $\pm$ 14.8)mmHg respectively. Hypertension was detected in 355(29.7%) of participants and the prevalence increased significantly after 4<sup>th</sup> decade ( $p$ <0.05). 32.3% of the study population were overweight while 18.6% were obese. On dipstick testing, 773(64.7%) had no proteinuria while the remaining 422 (35.3%) had varying degrees of proteinuria. There was a positive correlation between age and blood pressure ( $p$ <0.0001).

**Conclusion:** Hypertension, obesity and proteinuria are still prevalent in our population. Prevention and control of these risk factors should form the cornerstone of our CKD prevention program

#### 2. CKD/PM/2014-05

RISK FACTORS FOR CHRONIC KIDNEY DISEASES AMONG ADOLESCENTS IN KANO

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### Background

Chronic kidney disease [CKD] is a major public health problem. Its burden among adolescents and young adults is unknown in Nigeria. The aim of this study was to investigate risk factors for CKD in adolescent students and to compare commonly used formulae for estimation of glomerular filtration rate (eGFR).

### Methods

In an epidemiological cross-sectional study, two senior secondary schools in Kano

municipal were selected by simple balloting from a list of schools. All consecutive consenting/assenting students in the schools were included in the study. Relevant history, anthropometric parameters and blood pressure were recorded for each subject. Blood samples were taken for serum creatinine and blood sugar. The e GFR was estimated using Schwartz formula, Cockcroft and Gault (CG indexed for body surface area) and modification of diet in renal disease (MDRD) equations. Comparisons between the three formulae were made using linear correlation and kappa coefficient.

### Results

A total of 644pupils (344 females, 299males, mean age of  $16.7 \pm 2.5$ years) were recruited. The following risk factors for CKD were identified: Hypertension (7.2 %), Diabetes Mellitus (2.5%), obesity (6.5%) and family history of renal disease (1.15%).

There was a strong correlation between eGFR by MDRD and CG equations ( $\rho$  0.93), but no correlation between Schwartz and CG/MDRD ( $\rho$  0.5).

### Conclusion

Hypertension is the commonest risk factor for CKD in adolescents in the study population. There was a strong correlation between eGFR by MDRD and CG equations, but no correlation between Schwartz and CG/MDRD equations.

### 3. CKD/PM/2014-06

IgA Nephropathy in a 37 year old female Nigerian

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### Introduction:

IgA nephropathy (IgAN) is the commonest pattern of glomerulonephritis seen in the Western world. It is an important cause of progressive kidney disease with 25-30% of patients developing end stage renal disease within 25 years of diagnosis. There has been paucity of reported cases of IgAN in Nigeria as a result of limited kidney biopsies and absence of immunofluorescence (IF) and electron microscopy (EM) in histopathology analysis. The diagnosis of IgAN always requires a renal biopsy and subsequent IF.

### Case Report

A 37 year old woman was referred for nephrologist review on account of persistent proteinuria for three years. Investigations revealed: 24 hour urinary protein- 3.97g;urinalysis-protein 2+, blood 2+; urine microscopy- pus cells 2-3/hpf,

numerous red blood cells, epithelial cells +; urine culture- negative; urea- 24mg/dl; creatinine-1.1mg/dl; hematocrit- 39.3%; Anti-nuclear antibody- negative; viral screening- negative and a renal biopsy showed IgA nephropathy.

She was commenced on prednisolone 60mg daily but after two months, there was no significant reduction in 24 hours urinary protein; azathioprine was added with some reduction in urinary protein achieved.

**Conclusion:** This report highlights the need for routine renal biopsy for investigating proteinuric patients in our nephrology practice. It also brings to the fore the need to have the support of renal pathologist who will not just perform a light microscopy but also IF and EM. There is a low rate of performing renal biopsies in our environment, and as such cases like this may be missed.

**Key words:** IgA nephropathy, renal bioipsy, prednisolone, azathioprine.

#### 4. CKD/PM/2014-07

Aetiologies and Precipitants of Acute Exacerbation of Chronic Kidney Disease at the University College Hospital Ibadan.

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#### Background

Chronic kidney Disease (CKD) is a disease of public health importance associated with rising prevalence, exorbitant cost of treatment and high morbidity and mortality. The burden of the disease in

Nigeria is particularly high because the few seen at the hospital represented only a tip of the iceberg compared to many in the community who are undetected. Most CKD patients with stable renal function are often attended to in the clinics, however some are admitted into the ward with acute exacerbation of CKD from various precipitants. We review the record of all CKD patients admitted in the hospital with the aim of determining the pattern of aetiologies of CKD and identify the common precipitants of acute exacerbation of CKD.

**Methods:** In this retrospective study records of all patients with CKD admitted into the University College Hospital Ibadan between January 2008 and December 2012 were reviewed.

#### Result

A total of 1113 patients with diagnosis of CKD were admitted and managed over the period under review. The yearly average was 222.6 and there was a steady rise in cases of CKD over the 5years reviewed 2008 (168), 2009(193), 2010(237), 2011(253), 2012(258). Six hundred and eighteen (54.5%) were males while 495 (45.5%) were females. The mean age of the patients was  $44.2 \pm 16.6$  years. Common aetiologies of CKD among the patients include chronic glomerulonephritis (CGN) 343 (30.8%), hypertension 281 (25.3%), diabetes nephropathy 97(8.7%), human immunodeficiency virus associated nephropathy (HIVAN) 89(8%), obstructive uropathy 46(4.1%), others were sickle cell disease nephropathy (SCN) 10 (0.9), lupus nephritis 9(0.8%), toxic nephropathy 9(0.8%), autosomal dominant polycystic kidney disease (ADPKD) 8 (0.7%), chronic pyelonephritis 5(0.4%), analgesic nephropathy 5(0.4%) renal tuberculosis 2(0.2%), gouty nephropathy 1(0.1%), renal artery stenosis 1(0.1%) while aetiologies

were unknown in 203 (18.2%) patients with CKD. Sepsis was the precipitant of acute exacerbation of CKD in 593(48.4%) patients, others were uncontrolled hypertension 172(12.1%), heart failure 67(4.7%), herbal consumption 57(4.0%), drug induced 10(0.8%), hepatorenal syndrome 3(0.2%), progression to end stage renal failure 64(5.7%) while no precipitant was identified in 398 (32.5%) patients with CKD. Among patients with sepsis as precipitants urinary tract infection is the commonest infection identified 232 (43.1%) other were pneumonia 64(11.5%), gastroenteritis 36(6.8%), cellulitis, 2(0.37%), sepsis with unidentified focus 207(38.4%). One thousand and twenty four (72.3%) patients were discharged for follow up in the clinic, while 333 (23.5%) patients died, 33 (2.3%) discharged themselves against medical advice and 29(2%) were transferred to other units for management of co-morbidities.

### **Conclusion**

CKD is a leading cause of nephrology admission and chronic glomerulonephritis, hypertension, diabetic nephropathy, HIVAN and obstructive uropathy still remain the leading causes of CKD in this environment. Sepsis and particularly UTI is the commonest precipitant identified.

### **5. CKD/PM/2014-08**

The variability in the estimation of GFR using Renal Formulae: Implications for the evaluation of early renal dysfunction in Adults with Sickle Cell Disease

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**Introduction:** Sickle cell disease (SCD) is a recognized cause of chronic kidney disease (CKD) which manifests as sickle cell nephropathy (SCN). Glomerular hyperfiltration (GHf), proteinuria or microalbuminuria are early markers of SCN. Screening for these markers would be an important component of the overall strategy for prevention of CKD/ESKD among this patient population.

**Aim:** To determine the prevalence of glomerular hyperfiltration using two renal formulae, and proteinuria among adult patients with SCD in UITH Ilorin.

**Methods:** This is a retrospective study of 73 adult Patients with SCD being managed at the Renal care centre of UITH. Data on the demography, genotype, BP, Weight, dipstick proteinuria of the patients were collated. eGFR by MDRD and CKD-EPI formulae were determined. GHf was defined as  $GFR > 140 \text{ ml/min/1.73m}^2$ .

**Results:** The mean age was  $26 \pm 8$  years and 38(52%) were males. 66(90%) had HbSS while 7(9.6%) had HbSC. The mean of the weight was  $51.2 \pm 7.8$  kg and Cr  $71.8 \pm 29.3 \mu\text{mol/L}$ . The median eGFR by MDRD, was 129.6 (31- 527)  $\text{ml/min/1.73m}^2$  and by CKD-EPI, 126.4 (32.7-213)  $\text{ml/min/1.73m}^2$ . Based on MDRD, 19(46.3%) had hyperfiltration while using CKD-EPI, 10(24.45) had hyperfiltration. Thirteen (17.8%) of the patients had proteinuria.

**Conclusions:** Proteinuria and GHf are very common among patients with SCD. Formulae for eGFR estimation, MDRD and CKD- EPI do not give similar estimates of GHf, therefore the need for a comparative study with larger sample size between them in SCD patients. We suggest a possible need for a trial of ACEI/ARB in SCD patients with proteinuria and hyperfiltration.

## ORAL PRESENTATIONS:

### SCIENTIFIC SESSION 4

#### 1. CKD/PM/2014-09

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 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 ESKD would be reduced in a majority of our pre-dialytic patients, hence the purpose of this study

#### OBJECTIVES

(i) To determine the effectiveness of sodium bicarbonate therapy in retarding progression to ESRD

(ii) To determine 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 approximately 24 months.

A total number of 45 participants have been recruited so far. Inclusion criteria include a creatinine clearance of between 15 and 29ml/min per 1.73m<sup>2</sup>. The participants were randomly assigned to receive either oral sodium bicarbonate tablets 600mg thrice a day in the treatment group or routine standard care. The patients clinical and biochemical parameters were monitored monthly and data was analysed using SPSS package version 13.

**RESULTS:** There were a total of 28 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= 0.061). There is also a noticeable rise in the serum bicarbonate concentration in the subjects. 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 to ESKD.

## 2. CKD/RRT/2014-01

IMPACT OF SUBSIDIZED RENAL REPLACEMENT THERAPY ON CHRONIC KIDNEY DISEASE PATIENTS IN DELSUTH, OGHARA

G. OGBOGOLO, O.C.A OKOYE, E. A. ONWUEGBUEZI, J. OLOKPA

### **INTRODUCTION**

Hemodialysis is the most commonly used modality of Renal Replacement Therapy World-Wide. A global survey of RRT shows that 24% of all ESRD patients use HD in the US and 19% in Europe. In Africa, including Nigeria HD is the most common modality of RRT.

The recommendation in the developed world on the optimal dose of HD is often not achieved for most ESRD patients in Nigeria as a result of the high costs of treatment. The result is poor health and quality of life for patients as well as great economic and social burden for patients, their family and the community.

The Delta State Government initiated a subsidy for dialysis treatment for all indigenous patients requiring dialysis in the State. Dialysis cost only #5,000 per session without re-use of consumables, and erythropoietin costs #2,000 per dose.

### **AIM OF STUDY**

To determine the impact of subsidized renal replacement therapy on CKD patients in DELSUTH Oghara.

### **OBJECTIVE**

1. To ascertain the age/sex distribution of patients on RRT treatment seen in DELSUTH, Oghara.
2. To determine the frequency of HD sessions and erythropoietin usage before and during the subsidy.

3. To determine BP and Haemoglobin pattern of patients before and during the subsidy.

### **METHOD OF STUDY**

This was a retrospective observational study.

All CKD patients undergoing Hemodialysis treatment 6 months prior to and up to 6 months post subsidy were recruited.

Data were obtained from the dialysis register and dialysis treatment charts and collated.

### **RESULT OF STUDY**

Total of 13 patients were involved in the study. Sex ratio is 2:1 in favour of the males. Mean age is  $43 \pm 13$  years. Majority of the patients used temporary and Tunneled Jugular lines as Access for dialysis. AV Fistula – 23%, Tunneled Jugula – 38%, Femoral – 30%, Internal Jugular – 10%.

Their mean systolic and diastolic blood pressure readings were  $160 \pm 21.5$  and  $84 \pm 16.8$  before the subsidy and  $159 \pm 25.9$  and  $89 \pm 13.4$  during the subsidy. The mean hemoglobin concentration  $7.5 \pm 1.41$  before the subsidy and  $8.5 \pm 1.8$  during the subsidy. 23% (3) of the patients had more than 5 sessions of HD monthly before the subsidy compared to 61.5% (8) of the patients who had more than 5 sessions of HD during the subsidy.

23% (3) patients had erythropoietin weekly before the subsidy compared to 61.5% (8) patients who had erythropoietin weekly-twice weekly during the subsidy.

### **CONCLUSION**

The study showed that following the subsidized RRT, the frequency of HD among patients increased. The hematocrit levels of patients improved significantly, however there was no significant change in blood pressure levels.

### 3. CKD/RRT/2014-02

KNOWLEDGE, ATTITUDE AND WILLINGNESS TO DONATE ORGAN AMONG HEALTH WORKERS IN SOUTH WEST NIGERIA: SEARCHING TO ADVANCE NATIVE ORGAN DONATION.

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The third WHO Global Consultation on Organ donation and Transplantation advocates nation's self sufficiency. Striving to achieve this is optimizing the resources available within a country to meet demand for organ donation and transplantation. Attitudes and lack of knowledge among health workers (HWs) have been identified as barrier to successful organ donation. Good knowledge and cooperation among tiers of health care will increase the yield of organs for donation. The HWs with more positive attitudes about donation were more likely to request donation. We therefore set out to evaluate and compare the level of knowledge and attitude of health care workers toward organ donation at the three levels of care in South West Nigeria.

**Methodology:** This was a cross sectional study involving two tertiary health institutions, two secondary health

institutions (general hospitals) and four primary health centers in Osun and Ekiti states of Nigeria. The tertiary institutions were non-transplant centers but in the radius of about 80 -100 km to transplant centres. The study was conducted with a modified self-administered questionnaire to seek information on sociodemography, knowledge and attitude of the participants toward organ donation.

**Results:** Eight hundred and fifty questionnaires were given out but 766 were returned giving a response rate of 90%. Ninety-three percent had heard about organ donation, 82.5% had adequate knowledge and only 29.5% was willing to donate organ. There was no significant difference across the three levels of care. Female gender, permission by religion, adequate knowledge, knowing someone who has donated and someone waiting for transplantation were all associated with willingness to donate an organ.

**Conclusion:** Good knowledge is commendable but there is need to intensify educating the HWs to promote positive attitude towards improving indigenous organ donation.

### 4. CKD/M/2014-01

PREVALENCE OF HYPERTENSION, DIABETES MELLITUS AND OBESITY AMONG INHABITANTS OF MARIGA; A RURAL COMMUNITY IN BANGI LOCAL GOVERNMENT OF NIGER STATE.

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**BACKGROUND:** The burden of Non Communicable Diseases in the developing



countries of the world are on the increase. Hypertension, diabetes mellitus, obesity and proteinuria are recognised risk factors for development of chronic kidney diseases worldwide. Rural dwellers in addition to high burden of communicable diseases are not exempted from the growing burden of Non Communicable Diseases.

**OBJECTIVES:** This study was carried out to determine the prevalence of hypertension and other risk factors of chronic kidney diseases in a rural community in North Central region of Nigeria.

**METHODS:** This was a descriptive cross sectional study involving 858 participants. A structured questionnaire, clinical evaluation and laboratory investigations were administered by the investigators. Data was analysed using SPSS version 16.

**RESULTS:** A total of 931 participants were screened out of which 858 participants had complete data. Majority were male 494 (57.5%). The mean age was 38.34 ( $\pm 14.20$ ) years while the mean Body Mass Index, systolic and diastolic blood pressure were 23.98 ( $\pm 5.50$ ) kg/m<sup>2</sup>, 124.07 ( $\pm 20.61$ ) mmHg and 78.21 ( $\pm 13.50$ ) mmHg respectively. 189 (21.69)% and 203 (23.77)% had elevated systolic and diastolic blood pressures respectively. 5.7% of the participants had proteinuria and glucosuria was found in 3.36%.

**CONCLUSION:** The study revealed a high prevalence of hypertension and other risk factors for CKD such as obesity, high urinary protein excretion and glucosuria that were largely unknown to the majority of the participants.

## 5. CKD/M/2014-02

Kidney disease in HIV Patients: A comparison of Clinical manifestations and histopathology in HAART naive and HAART experienced patients.

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**Background:** With the advent of HAART, HIV infected patients have been able to achieve long term viral suppression. This has translated into longer life expectancy for these patients and lower risk of death from opportunistic infections. HIV patients now die more commonly from non-infectious conditions, such as cardiovascular, hepatic and renal diseases. This study is aimed at comparing the clinical and pathologic features of kidney disease among HAART-experienced and HAART-naive patients.

**Method:** This study was carried out at the University of Maiduguri Teaching Hospital, Maiduguri, Borno state. Consecutive patients attending the RVI clinic were recruited. Two hundred were HAART-experienced (on treatment for at least one year) and two hundred were newly diagnosed HIV patients who were yet to commence HAART at the time of recruitment. All patients had sociodemographic evaluation and relevant history taken. Clinical examination and laboratory evaluation were performed and patients who had Proteinuria  $> 1\text{g}/24\text{hours}$  and/or GFR  $< 60\text{ml}/\text{min}/1.73\text{m}^2$  had renal biopsy. The

data was analysed using SPSS package version 19.

**Results:** A total of 400 patients (276 females and 124 males) were recruited for the study. Mean age and BMI were 35.65(±8.94)years and 22.89 (±5.02)Kg/m<sup>2</sup>respectively. Mean Hb, CD4<sup>+</sup> counts and viral loads were 11.41(±1.82)g/dl, 366.97(±224.99)cells/μl and 53624.83(±22480.35)copies/ml respectively. Mean GFR was 79.93(±27.91)mls/min.

A total of 82(20.5%) patients had GFR < 60ml/min in the study population. Sixty-one were HAART-naive (30.5% of HAART naive population) and 21 were HAART-experienced(10.5% of HAART experienced population) Forty-eight (12%) patients had Proteinuria >1g/24hours. Sixty eight patients had renal biopsy, FSGS was the diagnosis in 44 patients (64.7%), minimal change disease, membranoproliferative glomerulonephritis and interstitial nephritis were also seen. Risk factors for kidney disease included increasing age, low body weight and BMI, high viral load, low CD4<sup>+</sup> counts, low Hb, and proteinuria.

**Conclusion:** The overall prevalence of kidney disease was 20.5% though higher in HAART naive patients (30.5% Vs 10.5%) suggesting a significant benefit of the treatment. HIVAN is the commonest histologic diagnosis in HIV patients in Maiduguri. Risk factors for kidney disease included increasing age, low body weight and BMI, high viral load, low CD4<sup>+</sup> counts, low Hb, and proteinuria.

## ORAL PRESENTATIONS:

### SCIENTIFIC SESSION 5

#### CKD/M/2014-03

AWARENESS, KNOWLEDGE AND BELIEF ON CHRONIC KIDNEY DISEASE IN A RURAL COMMUNITY OF SOUTH WEST NIGERIA.

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Chronic kidney disease (CKD) is defined as either kidney damage, estimated from markers such as albuminuria or glomerular filtration rate < 60ml/min per 1.73m<sup>2</sup> for 3 months or more The prevalence of CKD was reported to be 11.4-18.8% in community studies in Nigeria. Early identification and treatment of CKD will reduce the associated morbidity, mortality and the significant economic and public health burden. Majority of Nigerians live in rural areas and have low education. These affect the health literacy status with a consequence of poor level of awareness of chronic diseases and outcomes. Awareness and education on kidney disease impact on its effective management. Knowledge of CKD and risk factors increases perception of being at high risk and increasing health seeking behavior.

We conducted a cross sectional descriptive study to assess the level of awareness, knowledge and conventional risk factors of CKD in the community to strategize on

preventive modalities using the information gathered from this population.

**METHODS:** We used a pre-tested structured questionnaire to draw information on sociodemography, knowledge and risk factors of CKD from 613 residents aged >18 years.

**RESULTS:** A total of 563 residents completed the study, mainly farmers, with a mean age of  $45.8 \pm 19.0$  years and M: F ratio of 0.8:1. Only 33.7% had heard of kidney disease with 59.3% from the media and 35.3% from health workers; the level of knowledge of CKD was adjudged good in 25.5%. Majority (67%) do not know the correct location of kidneys. Only 10.6% could mention at least one function of kidney with only 24.5% agreeing that NSAIDs can cause kidney disease. Laboratory test for kidney function was known by 4.4% and 45.9% and 47.8% believe that CKD can be cured by spiritual means and herbal concoction respectively. Only 11.1% agrees CKD can be hereditary. Abdominal obesity and cigarette smoking were seen in 14.6% and 16.6% respectively. Hypertension was seen in 26.5% while 17.8% actually knew they were hypertensive. Diabetes mellitus was 3.4%, with only 0.7% who knew they had DM. Urinalysis shows 13.4% and 21.5% of haematuria and leucocyturia respectively. Hypercholesterolaemia is 11.2%.

**Conclusion:** There is a poor level of awareness and knowledge of CKD in the community with associated increase in risk factors of CKD. Efforts should be made to create awareness and educate people on CKD and prevention of its risk factors.

## **1. CKD/M/2014-04**

**AWARENESS LEVEL OF KIDNEY FUNCTIONS AND DISEASES AMONG ADULTS IN A SEMI URBAN POPULATION OF SOUTH EAST NIGERIA**

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**Background:** The prevalence of kidney diseases is on the increase in Nigeria and the cost of management of End stage Renal Disease is far beyond the reach of an average patient. Prevention is thus of paramount importance. Awareness of kidney diseases will help in its prevention.

**Aim:** To assess the awareness level of kidney functions and disease among adults in a semi urban population of South East Nigeria.

**Methods:** A semi-structured, researcher-administered questionnaire was the tool for data collection.

**Results:** Four hundred and thirty five (435) questionnaires were analyzed. There were 160 males (36.8%) and 275 females (63.2%), male/female ratio been 1:1.7. The mean age was  $42.8 \pm 14$  years with a range of 18 to 78 years. Among these, 56.3% were not aware of urine production by the kidneys while 71%, 64%, 51.3% and 88.5% were not aware of the kidney's involvement in blood production, blood pressure regulation, waste product removal and maintenance of strong bones respectively. Also 57% of the respondents did not know the common causes of kidney diseases in our environment and majority of the respondents (70.6%) did not know that kidney diseases could be inherited. Furthermore, 83.2% believe in alternative therapy to kidney disease while unawareness of dialysis as a treatment

modality was recorded in up to 68% of the respondents.

**Conclusion:** The awareness level of kidney functions and diseases among the population is poor. Measures need to be taken to improve this in order to stem the rising prevalence of chronic kidney disease in Nigeria.

## 2. CKD/M/2014-05

Burden of Acute Kidney Injury at the University College Hospital Ibadan  
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### Background

Acute kidney injury (AKI) morbidity and mortality have remained the same despite advances in knowledge of its pathophysiology, diagnosis and treatment modalities. This is particularly disturbing in Sub-Saharan Africa where availability of new innovations usually lags 3-5years before it becomes readily available for the benefit of the patients. This assertion buttresses the need to focus on prevention of AKI rather than treating it. We review the records of patients admitted and managed for AKI with the aims of determining the pattern of aetiologies and outcomes of AKI at the University College Hospital Ibadan.

### Method

In this retrospective study records of all patients with AKI admitted into the University College Hospital Ibadan between January 2008 and December 2012 were reviewed.

### Result

A total of 153 cases with AKI were admitted over the period under review, 2008 (36), 2009(30), 2010 (13), 2011(29), 2012 (43). There were 77(51.3%) females and 76 (49.7%) males. The aetiology of AKI identified among the patients includes sepsis 35(23%), gastroenteritis 32(22.6%), poststreptococcal acute glomerulonephritis 12(7.9%), drug toxicity 9(6.0%), obstructive uropathy 9(6%), herbal consumption (5.3%), hepatorenal syndrome 7(4.6%), haemoglobinuria 5(3.3%), human immunodeficiency virus (HIV) 2(1.3%), polyuria 2(1.3%), snake bite 1(0.7%), the cause was unknown in 20(13.2%). One hundred and twenty one (73.0%) patients with AKI had recovery of their renal function and were discharged to the clinic for follow up while 31 (20.4%) patients died while on admission.

### Conclusion

Sepsis and diarrhea diseases remain the leading causes of acute kidney injury in Sub-Saharan Africa which is also associated with high mortality and therefore awareness and health education directed towards improved personal hygiene, immunization and environmental sanitation are highly recommended.

### 3. CKD/M/2014-06

*DIALYSIS IN FEDERAL MEDICAL CENTRE,  
OWO; THE JOURNEY SO FAR*

*The good, the bad and the ugly  
November 2008 to October 2013*

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Renal Unit  
Federal Medical Centre, Owo

#### **Background**

Dialysis commenced on November 2008 at Federal Medical Centre, Owo sequent to the commissioning of the Renal /Dialysis Centre.

The centre has 4 brand new Fresenius dialysis machines with a chair attached to each in well spacious air-conditioned room and a separate water treatment room.

The dialysis centre which is blessed with 2 seasoned Nephrologist, 9 Registrars and 13 Nephrology nurses serves as a referral center to all the General Hospitals in Ondo state and some neighbouring towns and villages in and around the South West geopolitical zone of the country.

The centre deals mostly on haemodialysis though efforts on peritoneal dialysis are on going and we hope to go in to it as soon as possible, patients are been sent to us from the G O P D and the wards haven been seen by the nephrologist for HD and so far within the period of review, we have about 1974 sessions.

#### **Methodology**

A retrospective study was done using Renal Information Register and patients' case notes to gather necessary information on the patients undergoing HD in the centre.

#### **Result**

A total of 1974 dialysis sessions were carried out on 418 patients during the period of review.

There were 291 [ 69.62 % ] males and 127 [30.38 % ] females; with ages ranging between 6 and 85 years

A total of 1504 sessions [ 76.19 % ] were on account of Chronic kidney disease, while 470 sessions [ 23.81 %] were for Acute kidney Injury.

Identified cause of A R F cases encountered was majorly sepsis. Others recorded are:

Diarrhea and vomiting (fluid and electrolyte imbalance), obstetric related, nephrotoxic drugs and idiopathic,

Causes of CKD cases recorded were: Hypertension, DM, CGN, and Obstructive Uropathy and idiopathic

Majority of the males were between ages 20-45 years, where as majority of the females were between 30-65 years.

Vascular accesses utilized majorly at first haemodialysis sessions were obtained using femoral catheters

#### **Summary (the good, the bad and the ugly)**

The unit started with 3 registrars but can now boast of 9, had 9 nephrology nurses but can now boast of 13 and another one under training. Eight patients successfully had kidney transplant.

Majority of patient cannot sustain twice weekly haemodialysis, majority cannot sustain PCV of 20-30% through use of

erythropoietin thus necessitating haemoglobin boosting intervention viz: blood & blood products, iron dextran/sucrose, oral haematenics e.t.c.. Out of 8 transplant patients, 4 are alive with graft still functioning, 1 has rejected graft after 4 years, 1 certain to be dead and where about of 2 not certain. Patients are not given individualized care: first timers are strictly on two and a half hours session while subsequent sessions are 4 hours. No home follow up care or visits except on caregiver personal ground.

Overall case fatality rate is 0.96% (out of the total); with poverty and late presentations as contributing factors. Femoral canulation is still our major vascular access for hemodialysis.

Late presentation, ignorance and delayed intervention due to financial constraints were the major poor prognosis factors identified.

### **Conclusion**

Heamodialysis remains a viable thearapeutic option in the care of patient with renal failure in our domain.

Efforts are in place to make things better.

### **4. CKD/M/2014-07**

Clinical pattern and outcome of acute kidney injury patients from a Tertiary Health Institution in North- Western Nigeria

Makusidi AM, Liman HM, Yakubu A, Isah MD, Sadiq A, Chijioke A

Introduction: Acute kidney injury (AKI) is a common cause of hospitalization associated with high

mortality especially in developing countries. Despite better understanding of the pathophysiology, mortality from AKI remains source of concern worldwide. AKI varies between countries and even within same environment due to diverse diagnostic criteria. Studies from developing Nations have alluded to high incidence of AKI from preventable and potentially reversible causes affecting predominantly children and young adults. The growing concern as to whether the pattern and outcome have changed in recent times prompted this study

Method: All the patients that met RIFLE criteria for diagnosis of AKI were audited with specific reference to clinical pattern and outcome in North Western Nigeria.

Results: A total of 318 patients (198 males and 120 females) that met RIFLE criteria for AKI were seen with age range and mean of 20-80 years and  $42.0 \pm 12.0$  years respectively. Severe gastroenteritis, septicaemia, obstetric complications and toxic nephropathies were leading causes of AKI. Main clinical features in order of magnitude were oliguria, fever, body swelling, unusual weakness and vomiting. Sixty eight percent had haemodialysis while 32% were managed conservatively. Overall mortality was 26.4% and conservative management was associated with higher mortality than those that had haemodialysis. Factors associated with high mortality were late presentation, severe anaemia and sepsis.

Conclusion: AKI is common in our setting and causes are largely preventable and treatable. Identification and prompt correction of reversible causes and timely referral of severe cases to nephrologists are of immense importance

## ORAL PRESENTATIONS:

### SCIENTIFIC SESSION 6

#### CKD/M/2014-08

The Changing aetiology of ESRD in extreme Southern Nigeria

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**Introduction:** As we approach the sixth year of operation of our dialysis centre, we thought it wise to have a second look at the probable aetiology of the incident cases of ESRD in our centre and therefore plan community – wide preventive strategies.

**Methods:** Data from patients' case records in the last 4 years was collected and analyzed. Percentages for each of the aetiologies were reported. A trend test was performed to investigate any significant change in trend for each of the common aetiologies.

**Results:** A total of 428 incident ESRD patients (58.9% males and 41.1% females) were seen over the period. The aetiologies included chronic glomerulonephritis (21.0%), hypertension (13.1%), diabetes mellitus (14.0%), HIV – related nephropathy (30.4%), obstructive uropathy (7.0%), polycystic kidney disease (0.2%), sickle cell nephropathy (0.9%), Alport syndrome (0.2%), chronic graft rejection (0.2%),

undefined (12.9%). The mean age of those with HIV related kidney disease was significantly lower than that for hypertension (51.1±10.2 versus 34.6±9.6 years,  $p<0.001$ ), diabetes mellitus (55.8±10.4 versus 34.6±9.6 years) but higher than age at diagnosis for chronic glomerulonephritis (31.1±11.0 versus 34.6±9.6 years,  $p=0.04$ ).

The proportion of HIV – related nephropathy in incident ESRD patients increased from 23.4% in 2010 to 27.5% in 2011 and on to 35.2% in 2012.

**Conclusion:** HIV appears to be an emerging aetiology for ESRD in our environment and therefore requires early screening of the HIV population for CKD.

#### 1. CKD/M/2014-09

Resident doctors' knowledge and practice of chronic kidney disease: diagnosis and referral pattern

*Okwuonu GC, Ewelike ID, Adamu B, Unuigbo EI, Ojogwu LI*

**Background:** The prevalence of chronic kidney disease (CKD) in Nigeria is on the increase. Most patients with CKD present first to non-nephrologists and later to nephrologists with complications or in end stage renal disease (ESRD). To prevent early progression of CKD to ESRD, early diagnosis, optimal care and timely referral to nephrologists are crucial.

**Aim:** To assess the knowledge of CKD diagnosis, care and referral practices amongst resident doctors in Nigeria.

**Methods:** Self-administered questionnaires were distributed to resident doctors in

diverse sub-specialties attending an update course on medical ethics organized by the West African College of Physicians in August 2013 at UCH, Ibadan. The questionnaires were designed to elicit their knowledge of CKD diagnosis, common causes of CKD, screening of patients at risk, target blood pressure control and referral pattern.

**Results:** Three hundred and forty(340) questionnaires were analyzed. Respondents were spread across the six geo-political zones of Nigeria and different sub-specialties including 24.4% in internal medicine 17.4% in pediatrics, 16.8%, 30% and 27.3% in community medicine, family medicine and surgery respectively. Two hundred and eighty(82.4%) and 282(82.9%) would use GFR as the main diagnostic criteria and as an indicator for assessing the severity of CKD respectively. Eighteen percent did not know the correct blood pressure targets in CKD management. Furthermore, 77.4% of the respondents would use GFR in making decisions for referrals while 60.9% would use serum creatinine in making such decisions. For referral to nephrologist, 40.6% would refer completely to the nephrologist, 55.4% would consider co-management while 4% did not intend to refer to the nephrologist at all. The mean scores of knowledge of the internal medicine residents was significantly higher than that of non-internal medicine residents ( $p < 0.001$ ).

**Conclusion:** Resident doctors in Nigeria have good knowledge of CKD diagnosis and criteria for referral to nephrologists. Internal medicine residents have better knowledge of CKD diagnosis, screening and nephrology referral compared to residents in other specialties.

## 2. CKD/M/2014-10

### FACTORS ASSOCIATED WITH MEDICATION NON-ADHERENCE AMONG HYPERTENSIVES IN GHANA AND NIGERIA

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#### Introduction

The prevalence of hypertension (HTN) in sub-Saharan Africa (SSA) including Ghana and Nigeria is increasing while blood pressure control rates are low. A potentially modifiable factor for poor control of HTN is medication non-adherence (MNA), our study therefore aimed to determine factors associated with MNA among hypertensives in Ghana and Nigeria.

#### Methodology:

Multicentre cross-sectional study. Patients were from Korley Bu Hospital, Ghana, and University College Hospital Ibadan, Apapa General Hospital Lagos, and University of Port Harcourt Teaching hospital, Nigeria. MNA, depression and beliefs (and concerns) about medication were assessed using the 8- item Morisky scale, Patient Health Questionnaire 9, and beliefs about medication questionnaire.

#### Results:

The number of patients, and age distribution in the pooled data, Korlebu, Port Harcourt, Apapa, Ibadan were 357, 120, 73, 79, 85 and  $56.6 \pm 37.2$ ,  $57.0 \pm 37.7$ ,



47.4 ±12.5, 57.8±9.8, 62.9±11.5 years respectively. The respective proportions with MNA and HTN control were 67.5, 72.5, 95.9, 57, 49.9%, and 30.3%, 22.5, 5.5, 50.6, 44.7% . The mean age of patients who were non-adherent was 54.5±13.2, and for those who were, 60.9±12.2 years (p=0.000). In the pooled data, depression (p=0.000), concern about medication (p=0.000) and differences between beliefs about need of and concern about medications (p =0.005) were associated with MNA.

### Conclusion

The prevalence of MNA and poor HTN control is high among hypertensives in Ghana and Nigeria. Patients who are non-adherent are likely to be younger, be depressed or to have concerns in their beliefs about medications.

### 3. CKD/M/2014-11

Haemodialysis for Paediatric Acute Kidney Injury in UCH Ibadan, South West Nigeria: Preliminary report.  
Asinobi A.O, Ademola A.D, Alao M.A

**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

**Methodology:** A retrospective review of case records and haemodialysis registers of patients managed by the paediatric

nephrology unit who underwent haemodialysis for AKI from January 2006 to December 2013

**Results:** 77 children received haemodialysis for AKI over the study period, but full details were available for 36 children and their data was further analysed. There were 22 males (61.1%). The children were aged 3-13 (9.0 ± 2.9) years. The primary aetiology of AKI was massive intravascular haemolysis (IVH) (n=15), septicaemia (n=12), glomerulonephritis (n=5), while tumour lysis syndrome, haemolytic uraemic syndrome, and malaria occurred in one patient each. The number of sessions of dialysis ranged from 1 to 5 sessions per patient with a modal value of 2 sessions. Overall mortality was 22.2% (n=8) and was related to the aetiology of AKI with no deaths among patients with IVH, 4 deaths among patients with septicaemia, 3 deaths among the patients with glomerulonephritis.

**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.

### 4. CKD/M/2014-12

RENAL STATUS OF PATIENTS WITH BLADDER OUTLET OBSTRUCTION (BOO) AT PRESENTATION AT LADOKE AKINTOLA UNIVERSITY OF TECHNOLOGY TEACHING HOSPITAL, OSOGBO, SOUTH WESTERN NIGERIA

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## ABSTRACT

*Background:* Bladder outlet obstruction describes various urological conditions in which urine outflow from the bladder through the urethra is impeded. It is a common presentation in our practice and often complicated by renal impairment, probably due to late presentation of patient

*Objectives:* To ascertain renal function of patient with BOO at presentation vis-à-vis their duration of symptom and to find out common causes of BOO in our environment

*Patients and method:* All patients who presented with BOO between January 2010 and December 2012 were studied retrospectively. Details of their renal function at presentation were reviewed.

*Results:* A total of hundred patients aged 8-90 years were studied, modal age group were 61-70 (43%) in all 41% of patient had urethra stricture, 40% had benign prostatic hyperplasia while 19% had carcinoma of the prostate. All patients had their renal status assessed at presentation, 71% had renal ultrasound scanning while all patient had urea, creatinine and their GFR estimated. Ten percent of patient had poor corticomedullary differentiation, 20% had elevated urea, and 31% had elevated creatinine while 79% of the patient had abnormal estimated GFR.

*Conclusion:* commonest cause of BOO was prostatic diseases and significant number of the patient studied had renal impairment at presentation.