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Oral Presentations

HYPERTENSION AND CHRONIC KIDNEY DISEASE

Abstract TOR 1:

AVERAGED MULTIPLE PRE AND POST-DIALYSIS BLOOD PRESSURE MEASUREMENTS PREDICT LEFT VENTRICULAR MASS INDEX AND PULSE WAVE VELOCITY AS EFFECTIVELY AS 24-HOUR AMBULATORY BLOOD PRESSURE VALUES IN HAEMODIALYSIS PATIENTS

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Background: Although hypertension is a common, and an established major determinant of cardiovascular target organ changes in chronic renal failure, the best method of measuring blood pressure (BP) when predicting cardiovascular damage in chronic kidney disease is uncertain. The value of multiple pre- and post-dialysis blood pressure (BP) measurements in patients on haemodialysis is uncertain.

Methods: This study assessed whether 24-hour BP predicts cardiovascular target organ changes better than pre-, post- and averaged dialysis BP in 79 patients receiving maintenance haemodialysis (MHD) for an average of ~49 (3-300) months. 3 Pre- and 3 post-dialysis BPs were determined over 3 sessions of dialysis per week for 4 weeks and the average calculated from the mean of these measurements. Pulse wave analysis performed at the carotid, femoral and radial artery was employed to determine carotid-femoral pulse wave velocity (PWV) and central augmentation index (AIC). Echocardiography was performed to determine left ventricular mass (LVM) which was indexed to body surface area (LVMI).

Results: Using multivariate regression analysis with adjustments for potential confounders, pre- (p=0.005), post- (p<0.05) and averaged dialysis (p < 0.015) systolic BP were associated with LVMI and PWV. Neither 24 hour (r = 0.260, p < 0.05), day (r = 0.250, p< 0.05), nor night (r= 0.240, p <0.05) systolic BP were more closely associated with LVMI than the averaged dialysis systolic BP (r = 0.27, p < 0.02). Moreover, neither 24 hour (r = 0.410, p = 0.0003), day (r=0.400, p = 0.0005), nor night (r =0.410, p< 0.0005) systolic BP were more closely associated with PWV than the post-dialysis systolic BP (r=0.390, p=0.0001).

Conclusions: These results indicate that the average of multiple pre- and post- dialysis BP measurements are equally effective in predicting cardiovascular target organ changes (LVMI and PWV) as 24-hour ambulatory BP values in patients receiving HD.

Abstract TOR 2:

PREDICTORS OF KIDNEY DAMAGE IN NEWLY DIAGNOSED HYPERTENSIVE PATIENTS

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Background: Systemic hypertension is a well known cause of kidney damage and one of the leading causes of chronic kidney disease which is currently assuming epidemic proportion worldwide with its associated morbidities and prohibitive healthcare costs, particularly in emerging economies of sub-Saharan Africa. Identifying predictors of hypertensive kidney damage would provide clinicians with opportunity for appropriate therapeutic interventions to forestall initial or further kidney damage and ultimately prevent development of chronic kidney disease.

Aim: To determine the predictors of kidney damage using microscopic haematuria as surrogate marker in newly diagnosed hypertensive patients.

Methods: This is a post hoc analysis of the original cross-sectional study of urinary sediment in one hundred and thirty-eight newly diagnosed Nigerian hypertensive patients. Subjects with other conditions associated with urinary sediment formation including urinary tract infection were excluded. The surrogate marker of kidney damage was significant microscopic haematuria defined as $\geq 3/\text{hpf}$. This was determined by examination of urine sediment under a bright field microscope having centrifuged the urine and application of supravital Sternheimer's stain which is a mixture of Copper-phthalocyanine dye, national fast blue and a xanthene dye called pyronin B. Sternheimer's stain is used as an alternative to phase contrast microscope to enhance identification of elements of urinary sediment. Potential predictors of kidney damage evaluated were: age, sex, systolic blood pressure (SBP), diastolic blood pressure (DBP), mean arterial blood pressure (MAP), pulse pressure (PP), and body mass index (BMI). SPSS version 13 statistical software was used to analyze the data. The strength of association between the variables and kidney damage was determined by correlation statistics while regression methods were used to quantify the association and to predict kidney damage.

Results: The mean age of the patients was 43.2 ± 9.6 years and 76 (55%) were males. Twenty-one (15.2%) patients have significant microscopic haematuria while 27 (19%) have insignificant haematuria of $< 2/\text{hpf}$. SBP correlates positively, though weak but significant with kidney damage ($r=0.209$, $p=0.048$). Stepwise regression models identified SBP as the best sole predictor of kidney damage ($r=0.557$, $r^2=0.310$, adjusted $r^2=0.272$, $df=1$, $P_{\text{anova}}=0.011$, $P_{\text{coeff}}=0.011$) while SBP and Age were the next predictors accepted by the model ($r=0.72$, $r^2=0.505$, adjusted $r^2=0.447$, $df=2$, $P_{\text{anova}}=0.003$, $P_{\text{coeff}}(\text{SBP})=0.001$, $P_{\text{coeff}}(\text{Age})=0.019$). Other variables were rejected by the model (probability level of entrance was < 0.05 and removal, > 0.1).

Conclusions: The study suggests that systolic blood pressure may be the predictor of kidney damage in newly diagnosed hypertensive patients, and this effect seems to be amplified with increasing age. However, a strong conclusion can not be drawn on the association because of the cross-sectional design and small population sample of the study. A longitudinal study with large population is recommended to confirm this relationship.

Abstract TOR 3:

IS THERE AN ASSOCIATION BETWEEN INDICES OF ARTERIAL STIFFNESS/WAVE REFLECTION AND LEFT VENTRICULAR MASS INDEX IN PATIENTS RECEIVING HAEMODIALYSIS?

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The relationship between aortic stiffness and function and LVM in patients on HD is uncertain. This study assessed whether large artery function is associated with LVMI in 94 non-diabetic patients receiving MHD for an average of ~49 (3-300) months. Pulse wave analysis performed at the carotid, femoral and radial arteries was employed to determine carotid-femoral PWV and AIC. Echocardiography was performed to determine LVM which was indexed to body surface area (LVMI). Despite relations noted between systolic blood pressure and LVMI ($r=0.36$, $p<0.0005$) and pulse pressure and LVMI ($r=0.44$, $p<0.0001$), on univariate analysis no relationship between either PWV ($r=-0.08$), or AIC ($r=-0.10$) and LVMI was noted. Further, despite significant relations noted between systolic blood pressure and the mean of LV posterior and septal wall thickness (LV mean wall thickness-MWT) ($r=0.28$, $p<0.01$) and pulse pressure and LV MWT ($r=0.27$, $p<0.02$), on univariate analysis no relationship between PWV ($r=-0.11$), or AIC ($r=0.03$) and LV MWT was noted. Adjustments for potential confounders did not reveal a relationship between large artery function and either LVMI, or LV MWT. In conclusion, these results suggest that large artery dysfunction plays little role in contributing toward LVM or wall thickness in patients receiving chronic HD.

Abstract TOR 4:

SCREENING, DETECTION AND RESPONSE TO TREATMENT OF RENAL DISEASE IN HIV INFECTED INDIVIDUALS: A SINGLE CENTRE PROSPECTIVE STUDY

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This study was designed to screen antiretroviral therapy (ART)-naïve human immunodeficiency virus (HIV) infected patients for proteinuria, using urine dipsticks, at the HIV outpatient clinic at Johannesburg Hospital in an attempt to detect and treat early renal disease. In those with persistent proteinuria, a marker of kidney disease, renal biopsy was performed, ART with/out angiotensin-converting enzyme inhibitors (ACE-I) was initiated and patients were followed up for immunological and renal responses. After a minimum period of 12 months, a repeat biopsy was performed, where possible, to determine whether the histological lesions had responded to treatment. During urinary screening, proteinuria, leucocyturia and microscopic haematuria were common. Sterile leucocyturia may be associated with co-morbid sexually transmitted infection or tuberculosis. In the group that underwent renal biopsy with treatment, the renal and immunological response was highly statistically significant. On biopsy, HIV-associated immune complex disease was more common than HIVAN, a finding that contradicts international and some local data. Resolution of proteinuria was relatively rapid in comparison to the histological response to treatment, an effect not previously shown. This is the first study of its kind, to the author's knowledge, that prospectively evaluates the effect of ART with/ACE-I in ART-naïve HIV infected patients with both clinicopathological and histological criteria. It has shown unequivocally, that renal disease, particularly if detected and treated early in HIV infection, is responsive to treatment. These findings suggest screening for early detection and treatment of HIV-associated renal disease should be mandatory in HIV clinics in South Africa

Abstract TOR 5:

A LOOK AT THE GLOMERULAR FILTRATION RATE (GFR) OF HIV SEROPOSITIVE PATIENTS IN JOS, NIGERIA

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Background and Objective: Accurate assessment of renal function is important in human immunodeficiency virus (HIV) infected patients in order to determine the proper dose of renally excreted medications, including a number of commonly used antiretroviral drugs with known nephrotoxic potential. However, most HIV clinics in Nigeria do not estimate or measure the GFR of their patients before commencing them on antiretroviral drugs. In this prospective study, we took a look at the GFR of HIV seropositive patients attending the HIV clinic at Jos University Teaching Hospital.

Subjects, Materials and Methods: One hundred and fifty HIV sero-positive patients from the HIV/AIDS clinics, and 50 control subjects from the MOPD of JUTH, Jos, who met the inclusion criteria, were consecutively recruited from April 2006 to December 2006. Seventy five of the HIV sero-positive patients had AIDS, while the remaining 75 HIV sero-positive patients constituted the Non AIDS group. The CDC (Centre for Disease Control and Prevention) criteria were used in classifying the HIV sero-positive patients into two of the three groups. Twenty-four-hour urine collection as well as a blood sample from each patient in the study were taken for the determination of Creatinine Clearance (Clcr) and other relevant investigations. The data were analyzed using the EPI info software.

Results: Seventy-Five (50%) of the 150 HIV sero-positive patients had GFR of < 60mls/min. Thirty-Nine(52%) of these patients belonged to the AIDS group, while 36 (48%)belonged to the non AIDS group. Eight(16%) of the control subjects had GFR < 60ml/min.

Conclusion: The rather high percentage of retroviral positive patients with GFR < 60mls/min identified in this study informs the need for possible dose adjustment on commencement of antiretroviral drug therapy in Nigerian patients. Prior to the commencement of such therapy it is desirable to have an accurate assessment of the GFR of all patients.

Abstract TOR 6:

SPECTRUM OF CLINICAL PRESENTATIONS IN HIV PATIENTS WITH RENAL DISEASE

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Objective: To determine the clinical presentations of HIV patients with renal disease.

Materials and Methods: HIV infected patients presenting at UBTH Benin City were screened for renal function impairment. Their biodata, serum urea, serum creatinine, serum albumin, urine protein and creatinine were assessed. Their GFR using the 6 equation of MDRD and protein excretion using protein creatinine ratio were calculated. Patients were stratified according to their renal functions into normal renal function, mild, moderate and severe renal impairment using GFR ≥ 60 ml/min and PCR ≥ 200 , GFR ≥ 60 ml/min but PCR < 200, GFR 30 – 59ml/min, GFR < 30ml/min respectively. Their clinical presentations were documented. The data was analysed using SPSS Vs 13.0.

Result: Two hundred and four (53.3%) patients had renal function impairment, 40.2% had mild, 37.7% had moderate and 22.2% had severe impairment in their renal functions respectively. Their mean age was about 35.6±8.3 years. Easy fatiguability and weakness of the body were the commonest symptoms, occurring in 34.4% and 33.8% respectively of these patients studied. Nausea and vomiting were commonest in patients with severe impaired renal function occurring in 10(25.0%) and 16(40.0%) respectively. Urinary symptoms and body swelling were found to be commoner in patients with severe renal functional impairment. Anaemia was the commonest physical signs occurring in 45% of patients studied, 32.5% of patients with normal renal functions, and 62.5% of patients with severe renal functional impairment. Impaired conscious state, fever, hepatomegaly, pedal oedema, ascites, splenomegaly were mainly found in patients with impaired renal function. The mean systolic and diastolic blood pressure was within normal in both control and subjects with different stages of RFI.

Conclusion: There was an overlap in clinical presentations in HIV patients with normal and impaired renal functions but HIV patients with severe renal functional impairment were more likely to present with profound clinical features. There is need to screen all HIV patients for renal functions because clinical features may not be prominent in patients with mild/moderate renal impairment.

Abstract TOR 7:

**LIFESTYLE RISK FACTORS AND MARKERS OF CHRONIC KIDNEY DISEASE:
A COMMUNITY STUDY**

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Introduction: The burden and magnitude of CKD is enormous especially in developing countries. CKD currently is one of the world's major public health issues. In Nigeria there is no known population based study on CKD to date but a hospital based study suggests that ESRD constitutes about 8% of hospital admissions. In Nigeria as many other developing countries majority of the individuals afflicted with CKD are young and in their economically productive years usually in their 3rd decade of life. Worse still, a large majority of them >80% first consult a Kidney specialist after they have reached the terminal stage. These therefore underscore the need for screening for early detection of CKD. The study looks at several modifiable risk factors such as tobacco use, alcohol consumption and BMI in relation to markers of early CKD. This study was made possible by the grant from the Programme for Detection and Management of Chronic Kidney Disease, Hypertension, Diabetes and Cardiovascular Disease in Developing Countries (KHDC) initiated by the ISN in 2004.

Method: Socio-demographic data were obtained from 1947 adult Nigerians. Self-reported history of alcohol consumption, use of tobacco as snuff or cigarette or any other form of tobacco were obtained from the respondents using a modified WHO Steps questionnaire. Proteinuria, haematuria and estimated glomerular filtration rate (eGFR) stages 1 to 3 were used as markers of early CKD. Proteinuria was based on protein creatinine ratio (PCR) as per PARADE and CKD was defined as per KDIGO guidelines. The Statistical Package for Social Sciences (SSPS Inc, Chicago, IL) version 15 statistical software was used for data analysis. Cross tabulation assessed the association between lifestyle risk factors and markers of chronic kidney disease.

Results: We found significant association between use of tobacco and presence of markers of chronic kidney disease (ORs [95% CI]: 1.53[1.11–2.03], $p = 0.008$. The effect of consumption of alcohol on chronic kidney disease pointed to no appreciable risk. BMI was surprisingly negatively and significantly associated with markers of CKD – correlation coefficient (r): -0.220, $p < 0.001$; (ORs [95% CI]: 0.67 [0.51–0.89], $p = 0.005$.

Conclusions: Our study revealed a significant positive association between use of tobacco and markers of early CKD. We found a contradictory protective effect with increased BMI in this population. We did not find an increased risk of chronic kidney disease associated with alcohol.

Abstract TOR 8:

RESTLESS LEGS SYNDROME IN NIGERIANS WITH ESRD

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Background: Restless legs syndrome (RLS) has been shown to be a common disorder with prevalence ranging between 5 – 15% in most Caucasian population. The frequency of RLS is higher in ESRD patients than the general population. Previous studies in other parts of the world have shown a 12 – 62% prevalence of RLS in patients with ESRD. There is however, paucity of data on RLS in African Blacks with ESRD in the published literature.

Methodology: This is a cross-sectional descriptive study to investigate the frequency of RLS in Nigerians with ESRD. One hundred and one (101) consecutive ESRD patients were recruited from the renal unit of UBTH and Central Hospital, Benin City. The variables examined included age, sex height, weight, body mass index, educational status and blood pressure. Investigations included determination of random blood sugar, serum urea, creatinine, lipids, calcium, phosphate, albumin and the glomerular filtration rate determined using the cockcroft - Gault equation. Structured questionnaire based on the International Restless Legs Syndrome Study Group (IRLSSG) diagnostic criteria was administered to all the patients

Results: A total of 101 patients, were recruited and comprised 54 males and 47 females. The mean age \pm standard deviation of ESRD patients was 47.8 ± 15 years mean BMI 24.4 ± 64.6 , mean PCV \pm SD was $23.62 \pm 7.03\%$, while the mean serum Calcium \pm SD was 7.44 ± 0.39 mg/dl. The mean serum urea \pm SD was 173.69 ± 81.93 mg/dl, and mean serum albumin was 3.39 ± 25.95 mg/dl, and mean serum cholesterol, triglyceride were 201.64 ± 74.79 and 146.85 ± 70.37 mg/dl respectively. Six patients, comprising 4 females and 2 males met the minimum criteria for diagnosis of RLS, giving a frequency of 5.9%

Conclusion: Although RLS is a common disorder in Caucasian ESRD patients, it appears to occur relatively less frequently in Nigerians with ESRD. There is however, need for a much larger scale study to determine the true prevalence of RLS amongst Nigerians with ESRD.

Abstract TOR 9:

PATTERN AND CLINICAL CHARACTERISTICS OF ESRD IN ILE-IFE, NIGERIA

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Background: The prevalence of chronic renal failure had remained high worldwide and the epidemiology has changed significantly in the last decade in industrialised countries. While there have been significant improvements in patient's outcomes in developed countries, their state and survival is still appalling in developing countries. We reviewed our data over a 19-year period (1989-2007) to determine the clinical pattern and outcomes in our CRF population.

Methodology: Seven hundred and sixty patients' records were reviewed. The data on major causes, clinical presentation, renal replacement therapy offered and survival were retrieved and collated. Data was analysed using SPSS package version 16.

Results: Their ages ranged between 15-90 years (Mean \pm SD; 39.9 ± 1.67 years), there was a male preponderance with 534(70.3%) being males. Major presenting complaints were body swelling, uraemic symptoms and dyspnoea on exertion in more than half of the studied patients. 40.7% had headaches while 20.8% of them had associated blurring of vision. 22.2% had past history of renal disease. Aetiologic factors include chronic glomerulonephritis (43.7%), hypertension (31.1%), obstructive uropathy (6.7%), diabetes mellitus (3.7%), tubulointerstitial nephritis (2.2%), polycystic kidney disease (0.7%) and in the remaining 12% of the patients; the cause could not be ascertained. 161(21.2%) had exposure to nephrotoxic agents out of which 53.4% were herbal remedies. Renal replacement therapy offered included HD in 556(73.2%), CAPD in only 9(1.2%) patients and renal transplantation in only 7(0.9%). Only 38(6.8%) survived on HD for longer than 3 months while 7(77.8%) CAPD patients and all transplanted patients survived for between 6 months and 3 years ($P < 0.00001$). Median duration of survival after diagnosis for all the patients was 2 weeks while the mean was less than 3 months.

Conclusion: End stage renal disease is still prevalent with chronic glomerulonephritis and hypertension being the common causes. Prognosis is still grave as most patients survive for less than 1 month.

Abstract TOR 10:

CLINICO-PATHOLOGIC STUDY OF GLOMERULONEPHRITIS IN 38 ADULT NIGERIANS

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Background: Glomerulonephritis (GN) remains a common cause of chronic kidney disease with nephrotic syndrome being a common presentation in our environment. Different histological findings have been reported with mesangial proliferative GN relatively more common in some centres while Minimal change GN was reported to be more common in others. We conducted this study to reassess the pattern and determine response to therapy.

Aim: To determine histology findings on light microscopy in adults with nephrotic syndrome and assess their response to steroids and / or immunosuppressive therapy.

Methodology: We studied 38 patients that presented with nephrotic syndrome. Socio-demographic data, clinical and laboratory parameters were retrieved and renal histopathology was carried out. They were managed with steroids and/or immunosuppressive therapy for periods ranging between 3 months and 3 years and the results collated. The data was analysed using SPSS package.

Results: A total of 60 patients completed the investigations but only 38 had successful renal biopsy. Their ages ranged between 15 and 64 years with median of 22 years. There were 23 Males which constituted 60.5% of the study group. The commonest presenting features were body swelling and frothiness of urine in 80% of the patients. Their mean serum urea, creatinine, PCV and ESR were 8.2 ± 5.9 mmol/L, 148.5 ± 138.4 μ mol/L, $33 \pm 7.3\%$ and 92 ± 40 mmHr Westergreen respectively. Serum and urinary albumin concentrations were 22.2 ± 8 g/L and 7.5 ± 8.4 g / day respectively. Renal histopathology (light microscopy) revealed that minimal change GN and Focal segmental GS were most common. They were observed in 9 (23.6%) patients each. 7 (18.4%) patients had membranous GN while Mesangiocapillary GN was found in 5 (13.1%). Mesangial proliferative GN in 4 (10.5%) patients, while diffuse proliferative and amyloidosis were found in 2 (5.2%) patients each. All the patients had a combination of Angiotensin Converting Enzyme Inhibitors and diuretics while only 50% had steroids and only a few had immunosuppressive therapy. Majority of the patients relapsed between 2 weeks and 4 months of discontinuing therapy.

Conclusion: Minimal change GN and FSGS were found to be common. Steroid and immunosuppressive therapy was beneficial in some of the patients with Minimal change GN. There is the need for immunoperoxidase staining and electron microscopy to further characterise the histology findings.

MISCELLANEOUS

Abstract TOR 11:

RENAL PATTERNS AND OUTCOMES IN PATIENTS WITH ANCA-ASSOCIATED VASCULITIS: A SINGLE CENTRE EXPERIENCE BETWEEN 2000 AND 2007

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Introduction: This work aims to describe clinico-biological patterns and outcomes of patients with ANCA-associated vasculitis followed in Nephrology department at teaching hospital La Conception in Marseille.

Patients and Method: We conducted a retrospective study including all patients diagnosed with renal vasculitis between January 1st 2000 and December 31st 2007. Socio-demographical, clinical and paraclinical data and evolution were collected from medical records. Statistical analysis was performed with Microsoft Excel 2003.

Results: Prevalence of ANCA associated vasculitis during the study period was 0.5 %. Among 40 cases we excluded 7 of them because of incomplete data. Twenty-five had granulomatosis Wegener (WG), 7 cases of polyangitis microscopic (MPA) and 1 case with Churg-Strauss syndrome (SCS). Median age of patients was 57,7 years and sex-ratio 1,6. Clinical presentation was dominated by acute renal failure (100% of patients) frequently associated with pulmonary symptoms (75%), ENT (52% of WG) and neurologic symptoms (57% of MPA). Mean serum creatinine level at admission was 291 mmol/l. ANCA antibodies were found in all patients but they were atypical in 3 cases. Renal biopsy had been performed in 25 patients and revealed a pauci-immune crescentic glomerulonephritis in 96% of them. Aggressive tubulo-interstitial lesions were present in 46% of cases. Mean value of BVAS and FFS were 21,7 (10 - 41), 1,28 (1-2) and 0 for patients with WG, MPA and SCS respectively. Induction therapy combined steroids per os (1 mg/kg/j/6 weeks and tapered progressively) and cyclophosphamide IV monthly (0,7g/m² or 0,5g/m² if eGFR was <30 ml/min) in 91% of patients. Two patients with WG received therapeutic plasma exchanges and 7 patients required hemodialysis in emergency. Maintenance therapy comprised azathioprine and steroids for 75% of patients. With this protocol, we had 84% of patients in complete remission. Relapses occurred more frequently during maintenance therapy among patients with MPA (28%) compared to WG cases (12%). After one year follow-up median survival was 35 months, creatinemia was 135 mol/l. However, 24 % of patients reached end-stage renal disease within a mean period of 22,5 ± 6 months. Main complications of treatment were 6 cases of severe sepsis (with 5 deaths) and 2 cases of azathioprine induced bicytopenia.

Conclusion: ANCA associated vasculitis are frequent in our patients and present often with severe renal prognosis. Long-term outcomes are relatively good in spite of a mortality rate of 15% and a quarter of them entered dialysis at 3 years follow-up.

Keywords: RENAL OUTCOMES, ANCA ASSOCIATED VASCULITIS.

Abstract TOR 12:

THE LONG - TERM CLINICAL OUTCOME OF PATIENTS WITH BIOPSY – PROVEN PROLIFERATIVE LUPUS NEPHRITIS SEEN AT GROOTE SCHUUR HOSPITAL, CAPE TOWN, SOUTH AFRICA

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Background and Objective: The development of lupus nephritis (LN) in patients with systemic lupus erythematosus (SLE) is associated with increased morbidity and mortality. Few data are available on the long-term clinical outcome of patients with proliferative LN in South Africa. We undertook a retrospective study to investigate the clinical outcomes in patients with proliferative LN with regards to demographic, clinical, immunologic and histologic features and treatment.

Patients and Methods: The medical records of patients with SLE attending the Renal Unit of Groote Schuur Hospital, Cape Town, South Africa, who had kidney biopsy done between January 1995 and December 2004 and subsequently followed up till December, 2007 were reviewed retrospectively. Patients who had focal proliferative LN (WHO Class III) and diffuse proliferative LN (WHO Class IV) were included in the study. The primary outcome measure was doubling of baseline serum creatinine at kidney biopsy during follow up, need for dialysis or death.

Results: The study population consisted of 66 patients with proliferative LN (8 with WHO Class III and 58 patients with WHO Class IV) who were followed up for a median period of 39 months (range 1 – 130 months). Sixty one patients (92.4 %) were females and 5 (7.6 %) were males (female: male ratio was 12.2: 1). The racial constitution of the study population was as follows: Caucasian – 1 (1.5 %); Mixed Race (Coloured) – 51 (77.3 %); Black – 11 (16.7 %) and Asians – 3 (4.5 %). The mean ages of the study population at diagnosis of SLE and LN were 30.2 ± 9.8 years and 31.6 ± 10.2 years respectively. Thirty two patients (48.5 %) reached primary end points of doubling of serum creatinine, dialysis or death. Twenty four deaths were recorded with sepsis and renal failure accounting for 70.8 % of the deaths. Patient survival rates at 5 years and 10 years were 45 % and 36 % respectively. The mean survival time of the patients with WHO Class III LN was longer than that of patients with Class IV LN (112.2 vs. 62.5 months; $p = 0.72$). Factors found to predict primary end points on univariate analysis were serum creatinine at onset of LN ($p = 0.015$), nephrotic range proteinuria at onset ($p = 0.043$), diastolic blood pressure (DBP) at onset ($p = 0.04$), interval between the onset of SLE and LN ($p = 0.006$), non-remission of renal lesion at one year following therapy ($p < 0.001$), average systolic blood pressure (SBP) during follow-up ($p < 0.001$) and average DBP during follow-up ($p < 0.001$). The SBP at onset ($p = 0.054$), WHO Class IV ($p = 0.058$) and the glomerular filtration rate [GFR] at diagnosis of LN using the Modification of Diet in Renal Disease [MDRD] formula ($p = 0.089$) approached significance on univariate analysis. On multivariate analysis, only SBP on follow – up ($p = 0.029$, 95 % CI = 1.017 – 1.377) was significantly associated with primary renal outcome.

Conclusion: The long term prognosis of South African patients with proliferative LN is not as good as that reported in patients from Western countries. Patients with WHO Class III LN had better survival than those with WHO Class IV. The SBP on follow-up was the only factor that predict poor outcome on multivariate analysis. Sepsis and renal failure accounted for majority of the deaths recorded.

EXPERIMENTAL NEPHROLOGY

Abstract WOR 13:

POLYMORPHISMS OF THE OBESITY GENE (LEP) HAVE EFFECTS ON KIDNEY DISEASE PHENOTYPES IN BLACK SOUTH AFRICANS*IG Okpechi¹, R Ramesar², N Tiffin², B Mayosi¹, L van der Merwe³, BL Rayner¹**¹Department of Medicine, Groote Schuur hospital and University of Cape Town, South Africa,**²Department of Human Genetics, University of Cape Town, South Africa and Department of Statistics, Medical Research Council(MRC) of South Africa*

Background: Obesity and serum leptin have been associated with kidney disease. Hormones like IL-1, TNF- α and TGF- β are secreted by the adipose tissue and the genes regulating these hormones have been reported as candidate genes for kidney disease. We are presently unaware of reports on the association between the Leptin gene and kidney disease phenotypes in any population.

Methods: We recruited 293 non-diabetic black South Africans including 210 hypertensive probands and 83 normotensive first degree relatives from Gugulethu between May 2005 and July 2006. Demographic and anthropometric data was collected from the subjects. Blood was drawn in the fasting state for glucose, creatinine, lipogram, insulin, leptin and adiponectin. Urine albumin-to-creatinine ratio (ACR) was quantified from spot urine collection. Genotyping for common polymorphisms (G2548A, C188A, A19G and C538T) of the LEP gene was done at the human genetics laboratory of the UCT by PCR and restriction enzyme digests.

Results: The observed genotype and allele frequencies of the studied polymorphisms in this population were comparable to the Hapmap Yoruba data for this gene. Subjects homozygous for the A allele of the A19G polymorphism (16.7%) had a significantly higher ACR compared to the other subjects ($p < 0.05$). Estimated mean GFR (ml/min/1.73m^2) was also lower in this group of subjects (AA – 104.9 ± 22.3 , AG – 105.5 ± 29.4 , GG – 106.6 ± 30.0). Presence of the T allele of the C538T polymorphism had a “protective” effect over renal function with lower urine ACR and higher GFR. However, no association / effect were observed for the G2548A and C188A polymorphisms on renal phenotypes in this population.

Conclusion: Our study thus suggests that there is an association between the obesity gene and kidney disease in black South Africans. As this finding may have important implications on the relationship between obesity and kidney disease in Blacks, there is an urgent need for a genetic replication study to confirm / rebut these findings and for further experimental studies to be carried out on the link between obesity and kidney disease.

DIALYSIS AND TRANSPLANTATION

Abstract WOR 14:

ASSESSMENT OF PERITONEAL MEMBRANE TRANSPORT CHARACTERISTICS OF CAPD PATIENTS AT JOHANNESBURG HOSPITAL*Abdu A, ¹Naidoo S, ¹Malgas S, ²Naicker J, ¹Mweemba A, ¹Fabian J, ¹Paget G and ¹Naicker S.**¹Division of Nephrology University of Witwatersrand at Johannesburg Hospital and ²Department of Chemical Pathology University of Witwatersrand/ NHLS.*

Background: knowledge of peritoneal membrane transport characteristics is important for the formulation of an appropriate peritoneal dialysis prescription and adequate dialysis is associated with morbidity and

mortality amongst PD patients. Peritoneal equilibration test (PET) has been widely used and validated among different population types, though not much has been reported in indigenous African populations.

Aims and objectives: To assess the peritoneal membrane transport characteristics among CAPD patients at Johannesburg hospital using PET and to establish a reference value for this population.

Materials and methods: A cross-sectional study involving 80 consecutive ESRD patients treated by CAPD. PET was performed as described in detail by Twardowsky et al. Glucose oxidase method was used for the estimation of glucose while picric acid method was used for the measurement of creatinine in the dialysate. Correction factor for the interference of glucose in the creatinine measurement in the dialysate was also calculated.

Results: The mean age was 38 ± 12.43 years, 42.3% were females and 86% were blacks. Mean duration on PD was 19.8 ± 20.67 months. The means of 4 hour D/P creatinine D/D0 glucose were 0.74 ± 0.13 and 0.55 ± 0.5 respectively. According to these values reference ranges for defining the transport characteristics of our patients was proposed as above 0.87 for high transporters, between 0.74 and 0.87 as high average, 0.74 to 0.61 for low average and less than 0.61 for low transporters.

Conclusion: We validated the PET for the assessment of peritoneal membrane characteristics in indigenous African patients and a reference range for the classification of these patients proposed.

Abstract WOR 15:

ASSESSMENT OF NUTRITIONAL STATUS OF CAPD PATIENTS AT JOHANNESBURG HOSPITAL

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Background: Malnutrition, associated with morbidity and mortality, is reported to be prevalent among PD patients. Various nutritional parameters including anthropometric and biochemical measurements are used in the assessment of these patients. Subjective Global Assessment (SGA) is a simple and reliable tool for the assessment of nutrition and is validated in various PD populations.

Aims and objectives: To assess the nutritional status of CAPD patients at Johannesburg hospital and to identify a correlation between subjective global assessment, specific anthropometric parameters and albumin levels in these patients.

Materials and Methods: SGA using seven variables derived from medical history, and physical examination was administered to 50 consecutive adult CAPD patients. Anthropometric parameters including body mass index (BMI), mid upper arm circumference (MUAC), triceps skin fold (TSF), arm muscle area (AMA), and arm fat area (AFA) were assessed. Serum albumin and total cholesterol levels were also measured.

Results: The mean age was 37.9 ± 13.4 years, 54% were males and 74 % were blacks. The mean BMI was 24.76 ± 3.50 mean MUAC was 28.53 ± 3.89 mean TSF 85.6 ± 41.48 , mean serum albumin was 37.10 ± 7.6 while mean serum cholesterol was 5.32 ± 1.7 . Based on SGA scores 42% of our patients were well nourished, 50% moderately undernourished while 8% were severely malnourished. We noted significant correlation between SGA score and BMI, MUAC while there is no significant correlation with serum albumin level.

Conclusion: Malnutrition is common among CAPD patients in our center and SGA is reliable method for nutritional assessment in our patients.

ACUTE RENAL FAILURE AND TOXIC NEPHROPATHIES

Abstract WOR 16:

NEPHROTOXICS FREQUENTLY CAUSE HOSPITAL-ACQUIRED ACUTE KIDNEY INJURY IN CRITICALLY ILL NIGERIAN CHILDREN

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Objectives: To determine the (i) hospital incidence, prevalence and aetiology; (ii) frequency of each of the acute kidney injury (AKI) stages, and (iii) 60– day outcome in Nigerian children and adolescents with hospital – acquired AKI (hAKI).

Patients and method: Retrospective analysis of hAKI clinicolaboratory data was performed.

Results: One hundred and three (103) (3.13%) of 3,286 childhood and adolescent admissions (June 2004 – June 2008) had AKI. Twenty eight (27.2%) were hAKI while 72.8% were community – acquired AKI (cAKI). Annual hAKI incidence and prevalence rates were 0.17% (or 3.7 per million children population/ year [pmcp/ year]) and 0.84% (or 18.3 pmcp), respectively. Male (20): female (8) ratio was 2.5: 1. hAKI median age was 5 (0.063 – 15.0) years with 46.4% (13/28) <5 years of age. Mean time to AKI onset was 252 ± 292 (14 – 1008) hours. Mean serum creatinine (Scr) at baseline, AKI onset and maximum Scr (maxScr) were 59.0 ± 15.0 (0.67 ± 0.17 mg/dL), 272.0 ± 176.0 (3.1 ± 2.0 mg/dL), and 448.0 ± 340.0 (5.1 ± 3.8 mg/dL) $\mu\text{mol/L}$, respectively ($p < 0.01$). Median time to maxScr from AKI diagnosis was 60 (24 – 768) hours. maxScr was reached within 48 hours of AKI diagnosis in 14 (50%) patients; 72 – 96 hours in 5 (17.86%), and >96 hours in 9 (32.14%) patients; 68.42% (13/19) progressed from stage 1 or 2 to the next severe AKI stage. AKI–3 was the commonest hAKI type, and most anuric with high dialysis requirement ($p=0.0329$). Nephrotoxics (42.87%) was the leading cause of hAKI. 75% of recorded deaths were in the first 28 admission days. Median survival time was 23.5 admission (11– 52) days. Survival was similar in all AKI groups (Log rank $p > 0.25$). maxScr means for survivors (486.0 ± 382.0 $\mu\text{mol/L}$ or 5.5 ± 4.3 mg/dL) and non-survivors (353.0 ± 160.0 $\mu\text{mol/L}$ or 4.0 ± 1.8 mg/dL) were similar ($p>0.20$). The 60– day cumulative mortality was 30.57% (8/28).

Conclusions: Childhood hAKI was common in Nigeria but approximately four times less common than cAKI. Nephrotoxics caused hAKI frequently. While survival was not a function of Scr severity most deaths would occur within the first 28 admission days. The 60–day cumulative mortality was high.

Abstract WOR 17:

OUTCOME OF ACUTE RENAL FAILURE ASSOCIATED WITH INGESTION OF TEETHING SYRUP- THE ZARIA EXPERIENCE

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Background: In November 2008 different centres in Nigeria reported a sudden increase in young children seen with acute renal failure (ARF). Several children had been given a particular teething syrup containing paracetamol suspected to have been contaminated with diethylene glycol.

Methods: Review of patients seen at Ahmadu Bello University Teaching Hospital, Zaria after ingestion of the teething syrup.

Results: Twenty nine children presented with ARF during the period, 27 (93%) of whom had been given the syrup for symptoms thought to be due to teething. In most cases the syrup had been recommended by other mothers. Of the 27 children, 18(66.7%) were male, 9 female, Ages ranged from 6 to 24 months. Presenting complaints were anuria (duration 2 to 5 days), convulsions and severe respiratory distress. Challenges faced included problems with diagnosis, shortage of equipment and staff to cope with the sudden influx of patients needing dialysis and emotional distress experienced by parents and staff. Management of the crisis situation involved the whole paediatric department, the hospital management, pharmacovigilance unit and members of the departments of surgery, anesthesia, pharmacy, pathology and hematology. Some patients died before any intervention could be carried out. Others underwent peritoneal dialysis, exchange blood transfusion, and one received fomepizole. Twenty-five patients died (93%), one was discharged and one is still undergoing treatment.

Conclusion: Several valuable lessons were learned including the need to develop protocols to assist and guide staff during medical crisis situations, and the importance of training all pediatricians to carry out simple peritoneal dialysis.

Keywords: RENAL FAILURE, CHILDREN, DIETHYLENE GLYCOL, NIGERIA

Abstract WOR 18:

OUTCOME OF PAEDIATRIC DIALYSIS AT THE UNIVERSITY COLLEGE HOSPITAL IBADAN

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Background: There are few reports on paediatric dialysis in Nigeria

Objectives: To describe the outcome of acute paediatric dialysis at the University College Hospital (UCH) Ibadan in terms of mortality, discharge, and serum creatinine levels.

Methodolog: Cases of paediatric peritoneal dialysis (PD) and haemodialysis (HD) at the UCH Ibadan performed between February 2004 and September 2008 were reviewed. Primary urinary tract related acute renal failure (PUTRARF) was defined as acute renal failure (ARF) secondary to nephropathy, uropathy, or toxic causes. Other causes of ARF were classified as multiorgan dysfunction associated ARF (MDARF). Serum creatinine of ≥ 0.7 mg/dL at least 7 days post dialysis was regarded as indicating full recovery of renal function.

Results: Forty nine patients, 25(51%) females and 24 (49%) males, aged 7 days to 16 years. (mean 7.0 ± 4.1 years) had dialysis. Twenty three patients (46.9%) had HD alone, 23 PD alone; 3 (6.1%) had both HD and PD. Thirty two patients (65.3%) were in ARF and 17 (34.7%) in chronic renal failure (CRF). Among 24 patients with PUTRARF, 18 (75%) were discharged, 16 (66.7%) with normal renal function while 6 (25%)

died. Of eight patients with MDARF, four (50%) were discharged, two (25%) with normal renal function, while 4 patients died. Eleven (64.7%) patients in CRF died during admission. There was no mortality among patients who had full recovery of renal function. There was no significant difference in mortality between patients who had HD or PD.

Conclusion: The outcome of dialysis was relatively good in patients with ARF. Outcome in MDARF may be improved by prevention, prompt diagnosis and treatment of the primary cause. The outlook in children with CRF might be improved by early diagnosis, prompt management and establishment of facilities for chronic renal replacement therapy and paediatric renal transplant

Abstract WOR 19:

HRQOL AND PERFORMANCE OF PATIENTS ON MAINTENANCE DIALYSIS; HOW ACHIEVABLE ARE K/DOQI TARGETS

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Background: Maintenance haemodialysis is unaffordable and relatively inaccessible to majority of needy patients. Only about 5% of these patients are able to sustain HD for longer than 3 months.

AIM: To assess the quality of life and performance of ESRD patients on maintenance HD. We also set out to determine achievability of K/DOQI defined targets in these patients.

Methodology: We studied 22 patients that had dialysed for between 3 and 36 months. Their Socio-demographic data, clinical and laboratory parameters were retrieved and collated. HRQOL was assessed using Karnofsky performance status scale (KPSS) and the results collated. The data was analysed using SPSS package.

Results: Their ages ranged between 22 and 70 years with median of 41 years. Fifteen (68.2%) of them are males while females constituted 31.8%. They had between 1 and 3 sessions of HD per week with a mean of 2.4 ± 0.7 sessions/week (median 3 sessions/week). Duration of sustainable HD was 3 months – 36 months (median, 7 months). Their mean serum urea, creatinine, albumin concentrations, Calcium-phosphate product and PCV at initiation of HD were 19.8 ± 6.4 mmol/L, 954.2 ± 465.8 μ mol/L, 34.9 ± 8.2 g/L, 2.7 ± 1.2 mmol²/L² and $25.25 \pm 6.5\%$ respectively. The values after 3 months of HD were 15.1 ± 9.3 mmol/L, 599.5 ± 215.5 μ mol/L, 34.3 ± 10.1 g/L, 2.7 ± 0.5 mmol²/L² and $26.8 \pm 6.8\%$ respectively. HRQOL improved from a modal score of 60 to 80 after 3 months of therapy. Only 54.5% were able to afford 12 hours of HD per week, 86.4% had parenteral iron therapy but only 50% were able to sustain erythropoietin therapy for up to e"12 weeks. Only 31.6% achieved the K/DOQI target for Hb or PCV, while 50% could not achieve the serum calcium target while 54.5% could not achieve that for phosphate.

Conclusion: Maintenance dialysis though beneficial is still largely unaffordable by majority of our patients. There is the need to conduct larger studies with longer follow up in our patients to determine the African or even Nigerian targets.

Abstract WOR 20:

AN ASSESSMENT OF BLOOD ERYTHROPOIETIN LEVELS IN HAEMODIALYSIS PATIENTS ATTENDING ADDINGTON HOSPITAL, DURBAN, SOUTH AFRICA

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Background: Anaemia being one of the most severe complications of end stage renal disease (ESRD) is presently being managed with treatment by recombinant erythropoietin (RHuEPO). Although RHuEPO is routinely administered used levels of erythropoietin is not known in South African population with ESRD.

Aim: To Measure and compare erythropoietin levels in haemodialysis (HD) patients receiving RHuEPO or not and healthy controls.

Method: Forty haemodialysis patients on RHuEPO therapy and ten haemodialysis patients not on RHuEPO therapy from the Haemodialysis unit at Addington Hospital, Durban, South Africa and ten healthy individuals were recruited to participate in the trial. Blood samples collected monthly for 6 months were centrifuged at 5°C. Plasma was isolated, stored at -20°C and subsequently used in enzyme linked immunosorbent assay (ELISA) to measure erythropoietin level from Roche Laboratory^R. Comparisons between groups was done using Chi-square test from Instat 3 program(Graphpad^R)

Results: The mean EPO concentration of the healthy male individuals (93.59, ± 11.50 mIU/mL) being almost similar in the male HD patients (94.09, ± 7.54 mIU/mL) receiving RHuEPO treatment ($p > 0.05$). However, the mean HB levels of the healthy male individuals (15.12 ± 0.32 g/dl) was significantly higher than the HD male patients (9.87, ± 0.26 g/dl) receiving RHuEPO treatment ($p < 0.05$). Similar observations were recorded in females. EPO concentration in haemodialysis was significantly higher in female (139.42 \pm 15.24) than in male patients (119.49 \pm 7.54) ($p = 0.02$). No statistically significant difference in EPO concentration was found between patients on RHuEPO and those not receiving RHuEPO.

Conclusion: Despite having similar blood levels of erythropoietin than normal control HB level was significantly lower in our haemodialysis patients. This confirms the degree of resistance to erythropoietin in haemodialysis patients previously reported in the literature.

Abstract WOR 21:

A REVIEW OF THE CLINICAL PRESENTATION AND OUTCOME OF HEPATORENAL SYNDROME IN ILE-IFE, NIGERIA

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Background: Hepatorenal syndrome (HRS) is defined as the development of acute onset of renal insufficiency and /or failure in patients with established chronic liver disease (CLD). It's a common cause of intensive care admission in patients with CLD.

Objective: To assess magnitude and outcome of HRS in our setting and determine if possible factors contributing to mortality.

Methods: The case records of patients managed with chronic liver disease over a six year period (1st January 2000 – 31st December 2006) were retrieved. Information on socio-demographic data, clinical evaluation, investigation results, duration of admission, treatment and outcome were retrieved and collated.

Results: A total 28 patients with established CLD (Liver Cirrhosis and/or primary liver cell carcinoma) had HRS during the period which comprised of 22 (78.6%) males and 6 (21.4%) females with a M:F ratio of 3.7:1. Their ages ranged between 12 and 67 years (mean \pm SD; 46.9 ± 14.6 years). 15 (53.6%) were admitted with hepatic encephalopathy and 18 (64.3%) had clinical ascites which was massive in 10 (35.7%) patients. Primary diagnosis was Liver cirrhosis in 22 (78.5%) and Primary liver cell carcinoma in 6 (21.5%). Majority had type 1 HRS while only 2 had type 2. Mean values of serum urea and creatinine were 20.5 ± 10.2 mmol/L and 604.2 ± 447.6 μ mol/L respectively. Eighteen (64.3%) had hyponatraemia while only 2 (7.1%) had hypokalaemia. Twenty two (78.5%) patients died between 1 and 67 days of admission while only 2 patients were discharged after 21-34 days of admission. The last 4 discharged against medical advice. The mean (\pm SD) duration of admission for all patients was $12.6 (\pm 15.1)$ days. Continuous renal replacement therapy was not available at the time hence could not be offered to the patients.

Conclusion: The outcome of hepatorenal syndrome is still very poor. There is the need to explore use of octreotide, midodrine and continuous haemofiltration on a short term as a bridge to liver transplantation which is the definitive treatment.

Abstract THOR 22:

A REVIEW OF RENAL TRANSPLANT LIVING DONORS ATTENDING INKOSI ALBERT LUTHULI CENTRAL HOSPITAL, DURBAN, SOUTH AFRICA

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Background: The shortage of cadaver organs has increased the reliance on living donor related transplants. The incidence of end-stage renal disease is increasing in our population.

Methods: This is a retrospective study of kidney donors attending the donor clinic at Inkosi Albert Luthuli Central Hospital. Medical records of 50 donors were examined over a three year period. Mean arterial pressures, creatinine clearances and 24 hr urinary protein excretion collections were recorded at the first visit and at the last visit. The patients' ages and racial demographics were also recorded. Chi-square test using Instat 3 statistical program (Graphpad^R, San Diego, CA, USA) was used to analyse results.

Results: The average age of the renal donor was 44.92 years (± 1.32 yrs). Forty- one of the donors were female and nine were male. The donors were divided in terms of racial demographics as follows: forty Indians, six Whites, two Blacks, and two Coloureds. The average mean arterial pressure at the 1st visit was 91.3 mm Hg and was 91.2 mm Hg at the last visit. The average creatinine clearance at the 1st visit was 88.1 ml/min. The average creatinine clearance at the last visit was 87.4 ml/min. No statistically significant difference was found between the average 24 hour urinary protein excretion at the 1st visit (0.16g/24hrs) and at the last visit (0.2g/24hrs). [$p = 0.16$]

Conclusion: There was no significant decrease in creatinine clearances nor significant increase in 24 hr urinary protein excretion rates, and mean arterial pressures in the donors within the three year period. Renal organ donation is the most common in females, and the Indians race groups.

Abstract THOR 23:

FIRST RENAL TRANSPLANT IN UCH, 7 MONTHS AFTER

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Background: Chronic kidney disease (CKD) is a global health problem marked by long term and usually irreversible loss of kidney function. In Nigeria, there is a lack of precise data on the burden of CKD but in some studies it is said to account for 2 – 10% of medical admissions and there is growing evidence that it will pose a significant problem in the coming years. Dialysis provides incomplete replacement of lost renal excretory function however Kidney transplantation (KT) is globally adjudged the best alternative treatment for end stage renal disease (ESRD) in preference to life-long dialysis. In Nigeria Kidney transplantation is very much at its teething stages and is presently offered in only 2 hospitals in the country. Only living related transplantation thus far has been done. The University College Hospital had its first living related renal transplant in May 2008.

Methods: A case report of the first renal transplant in UCH six months after. The medical report of the patient and relevant literature was reviewed.

Results: We report the case of a 32 yr old unmarried Yoruba man who runs a business center in Ibadan and was first referred to our hospital two years ago with a finding of severely elevated BP and elevated serum urea and creatinine. He had an estimated GFR of 5.8ml/min using the Cockcroft – Gault equation. He was anemic, had cardiomegaly and bilaterally shrunken kidneys. He had haemodialysis for a year preceding the surgery. The recipient was HLA haplo identical to his younger sister, the donor. They were both blood group O+ve and lymphocytotoxic cross match was negative. The surgery was well tolerated and he is presently on cyclosporine, mycophenolate mofetil, prednisolone and anti – hypertensives. Three months post – op, he had a urinary tract infection with transient rise of serum creatinine. He subsequently had two more episodes and an episode of malaria each time associated with transient increases in serum creatinine. He has been noted to have complaints attributable to cyclosporine viz hirsutism, hypertension and polycythemia. He is having regular follow up and investigations. Six months after, we are wary of the problems that may still occur such as late acute rejection, late acute calcineurin inhibitor toxicity, cardiovascular Disease, recurrence of the primary disease and side effects of the other drugs.

Conclusion: Kidney transplantation is cost effective and offers a good quality of life for ESRD patients. Poverty, inadequate facilities and lack of donors are major problems facing Kidney transplantation in our society. Improvements in short- and long term renal allograft survival have been very encouraging. This reflects multiple influences, including more effective immunosuppression, more use of living donors, and better medical and surgical care. There is a need for more transplant centers in Nigeria with better funding for us to improve the specialist care we offer in this area.

Keywords: END STAGE RENAL DISEASE (ESRD), KIDNEY TRANSPLANTATION (KT), DIALYSIS

HYPERTENSION AND CHRONIC KIDNEY DISEASE

Abstract TPO 1:

IS ROUTINE URINALYSIS USEFUL IN NEW ADMISSIONS INTO THE MEDICAL WARDS?

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Background: Routine urinalysis is considered as an essential laboratory investigation in patients admitted into the medical wards of most hospitals in Nigeria regardless of the nature of illness of the patient. This practice holds its root in the believe that routine urinalysis (an inexpensive multiple parameter screening test) may reveal unsuspected co-morbid illnesses in the admitted patient in addition to documenting expected urinary abnormalities in the patient. However, given the heterogeneous nature of the disease conditions of the admitted patients and the non-specificity of the results of routine urinalysis, the usefulness of routinely carrying out the procedure on all admitted patients is doubtful.

Objectives: This study examines the usefulness of routine urinalysis in admitted patients by determining the prevalence of abnormal urinary findings in the patients, and reviewing the case notes of the patients on discharge for documented clinical action taken on the urinary abnormality by the managing team. The sensitivity and specificity of glycosuria in the admitted patients was also examined.

Methods: One hundred and seventy two patients admitted into the various medical wards of our institution between the 1st of June to 31st July 2006 were analysed. 32 (18.6%) had abnormal dipstick urinalysis, 35(20.4%) had abnormal urinary sediments. 26 (15.1%) patients had abnormalities in both tests.

Results: Proteinuria and significant pyuria were the most common dipstick and urinary sediments abnormalities occurring in 16 (9.3%) and 9 (5.2%) of patients respectively. Sensitivity of glycosuria was 21.4% with a specificity of 98.6%. Urine MCS was requested in three patients with pyuria but no result was obtained by the managing team.

Conclusion: We conclude that routine admission urinalysis has limited value in clinical practice as clinical response to abnormal urinary findings are often not pursued.

Abstract TPO 2:

CHRONIC KIDNEY DISEASE IN ADULTS WITH METABOLIC SYNDROME: A COMPARISON OF TWO DEFINITIONS

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Introduction and Aim: The burden of chronic kidney disease and other non-communicable diseases is increasing globally. Recent studies suggest that metabolic syndrome may contribute to the development of

chronic kidney disease. This study was undertaken, with the sole aim of determining the prevalence of CKD in subjects with MS as determined by the ATP III and IDF criteria.

Methods: 240 consenting adults (18 to 70 years), attending the general out-patient clinic of General Hospital Okrika for various ailments were studied. Subjects were screened for metabolic syndrome as defined by IDF and ATP III. Estimated GFR (eGFR) was determined with MDRD formula and CKD was defined as eGFR less than 60ml/min/1.73m². Data was analyzed using SPSS version 12.0 and Epi info version 4.6; p value < 0.05 was considered as significant.

Results: 84 (35.0%) of 240 subjects had metabolic syndrome as defined by NCEP ATP III, while 85 (35.4%) had metabolic syndrome as defined by the IDF definition. The subjects were predominantly females and mean age was between 54.74±15.30 and 55.60±14.81 years. Four of 84 (4.8%) subjects with MS by ATP III had CKD and similarly 3 of 85 (3.5%) subjects with MS by IDF definition had CKD. Amongst subjects without MS by either definition, the prevalence of CKD was 4 of 140 (2.9%). The prevalence of CKD though higher among subjects with metabolic syndrome by ATP III, compared to those with IDF and subjects without metabolic syndrome, the differences were not statistically significant ($X^2=0.14$; $P=0.710$). Comparison of MS subjects without CKD and those with CKD did not show any significant difference in age, waist circumference, BMI, blood pressure, FBG and lipid profile ($P>0.05$).

Conclusion: CKD was commoner in subjects with metabolic syndrome compared to those without metabolic syndrome, though the difference was not statistically significant. The prevalence of CKD in subjects with metabolic syndrome in our study population did not differ significantly when the different metabolic syndrome definitions were employed.

Abstract TPO 3:

AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE: PRESENTATION OF SIX CASES

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Introduction and Aim: Autosomal dominant polycystic kidney disease (ADPKD) is the most common hereditary renal disorder in adults worldwide. Progression to ESRD most commonly occurs in middle age and later. In North America and Europe it is the most frequent genetic cause of renal failure in adults accounting for 6-10% of cases of ESRD. The prevalence of this disease in our environment is not known. We present six cases which were seen in our unit between January and September, 2008, to highlight the need for early detection.

Methods: Case notes of these patients were retrieved from the records department and relevant socio-demographic, clinical and laboratory data were extracted for analysis. Data was analyzed with SPSS version 12.0.

Results: Six cases were seen over a nine-month period [4 (66.7%) males, 2 (33.3%) females]. Age ranged from 30 to 56 years (mean age 46.17±12.34 years). They were predominantly civil servants 4 (66.7%). The ethnicity of the patients was Ikwerre 3 (50%), Igbo 2 (33.3%) and Engeni 1 (16.7%). Two (33.3%) had positive family history of hypertension; 1 (16.7%) had positive family history of ADPKD. Common clinical features were ballotable kidneys (66.7%), peripheral oedema (50.0%), pallor (50.0%) and palpitations (33.3%). Mean systolic BP was 161.67±22.29mmHg; mean diastolic BP was 97.50±14.05mmHg; 5 (83.33%) of the patients had hypertension. Mean right and left renal lengths were 15.57±1.07cm and 13.83±0.84 cm

respectively, while mean right and left renal widths were 7.73 ± 0.35 cm and 7.57 ± 1.07 cm respectively. Four patients (66.7%) were in ESRD with a mean eGFR of 7.6 ml/min. The mean eGFR for all six patients was 40.83 ± 57.24 ml/min. Mean PCV, serum sodium, potassium, bicarbonate, urea and creatinine were $28.17 \pm 5.91\%$, 129.83 ± 7.36 mmol/L, 4.23 ± 1.03 mmol/L, 21.33 ± 5.28 mmol/L, 18.35 ± 14.12 mmol/L and 600.17 ± 452.14 μ mol/L respectively. Mean serum total protein was 63.33 ± 5.69 g/L and mean serum albumin was 34.75 ± 4.27 g/L. The mean serum total cholesterol, HDL-cholesterol and FBG were 3.62 ± 1.93 mmol/L, 0.75 ± 0.19 mmol/L and 8.50 ± 6.35 mmol/L respectively. Significant gender differences were observed only in serum sodium ($p=0.004$), bicarbonate ($p=0.003$), HDL cholesterol ($p<0.001$) and eGFR ($p=0.011$).

Conclusion: Most patients were middle-aged, male, civil servants with hypertension and ESRD at presentation, highlighting the need for early detection through screening programs.

Abstract TPO 4:

CHILDHOOD IDIOPATHIC STEROID RESISTANT NEPHROTIC SYNDROME: MEMBRANOPROLIFERATIVE GLOMERULONEPHRITIS AND FOCAL SEGMENTAL GLOMERULOSCLEROSIS ARE THE PREDOMINANT GLOMERULAR LESIONS IN SOUTHWESTERN NIGERIA

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Objectives: To determine the clinicopathologic characteristics and outcome in children with idiopathic steroid resistant nephrotic syndrome (iSRNS).

Patients and methods: A retrospective review of clinical charts of 23 Nigerian children diagnosed with iSRNS between January 2001 and December 2007 was done.

Results: Steroid resistance (55%) was primary and secondary in 19 and 4 patients, respectively. Mean age at diagnosis was 8.3 ± 3.5 (2.1 to 13) years; male (16) / female (7) ratio was 2.3:1. The glomerular histopathologic lesions were membranoproliferative glomerulonephritis (MPGN), focal segmental glomerulosclerosis (FSGS), and mesangial proliferative glomerulonephritis in 10 (43.5%), 9 (39.1%), and 2 (8.7%) patients, respectively; minimal change disease (MCD) and membranous nephropathy accounted for 4.35% each. Median tubulointerstitial (TI) score was 2 (0 – 6). Eighteen (78.3%) patients received first line treatment that comprised pulse intravenous (IV) cyclophosphamide infusion, and IV dexamethasone \pm lisinopril or spironolactone; 3 (13%) received other treatment regimens while two declined treatment (8.7%). Kaplan – Meier survival analysis revealed 57.12% cumulative complete remission (CR) rate. CR was better with MPGN compared to FSGS (Log rank p value < 0.05). TI injury severity correlated poorly with time to CR in FSGS and MPGN ($r = 0.0522$; $p > 0.50$). The overall median time to CR from start of steroid sparing agents in 12 of the 21 treated patients was 4.5 (0.43 - 11.0) weeks. Eight relapses occurred in 5 patients; overall median relapse-free duration was 4 (1.9 – 14) months. Remission was sustained in 3 patients. Cumulative renal survival was poor in 18.0% (eGFR < 80 mL /min/1.73m²). The median follow up time was 8 (6 – 58) months.

Conclusions: Given the high prevalence of iSRNS and preponderance of non – MCD in this study, we strongly recommend routine renal biopsy for nephrotic Nigerian children. While response to combined steroid and steroid-sparing agents was generally good, it was significantly better with MPGN compared to FSGS.

Abstract TPO 5:

**LIPID PROFILE OF PATIENTS WITH CHRONIC KIDNEY DISEASE IN
YAOUNDE GENERAL HOSPITAL**

V Fokuo, J Tataw, H Fouda, FKM Toukam, G Ashuntantang, C Noueduo and J Ngogang

Introduction and Objectives: Chronic kidney disease is a major public health problem world wide. Dyslipidemias are common in chronic kidney disease and constitute not only a progression factor but also a cardiovascular risk factor in patients with chronic kidney disease. The aim of this study was to determine the lipid profile of patients with chronic kidney disease (CKD) seen in the nephrology clinic.

Methods: To reach these objectives, we carried out a hospital based retrospective case review over 6 years in the internal medicine -nephrology ward of the Yaoundé General hospital. We excluded all patients who were on lipid lowering drugs at the time of presentation and those on dialysis. A lipid profile was requested at the first nephrology consultation. Total cholesterol, triglycerides and HDL-cholesterol were quantified using enzymatic methods by the hospital laboratory. LDL-cholesterol was calculated using the Friedwald formula. The ANOVA \$ KRUSKAL WILLIS statistical tests were used for multivariate analysis. The threshold for statistical significance was set at $P < 0.005$

Results : A total of 149 patients were seen during the study with 69.1% of them males. The mean age of the population was 52.01 ± 10 years. Hypertension (43.5%), Diabetes (24.8%) and chronic glomerulonephritis (12%) were the principal etiologies of chronic kidney disease. HIV was present in 5.3% and in about 4% the etiology was unknown. Over 62% of these patients were in stage 5 of chronic kidney disease. The prevalence of dyslipidemias were; 44% for hypercholesterolemia ($>200\text{mg/dl}$), 36% for hypertriglyceridemia ($>130\text{mg/dl}$), 40.9% for raised LDL-C ($>130\text{mg/dl}$) and 46.6% for low HDL-C ($<40\text{mg/dl}$). The mean atherogenicity index was 4.2 ± 0.3 , with 36.3% being above 3.5. Age, Sex, Stage of CKD, alcohol and tobacco use, and a past history of a cardiovascular event did not seem to influence the lipid profile. Patients with chronic glomerulonephritis had significantly higher values of total cholesterol ($P=0.000$), triglycerides ($p=0.02$) and LDL-C, ($p=0.000$). Patients above 50 years of age had significantly lower levels of total cholesterol ($P=0.000$), triglycerides ($p=0.004$), LDL-cholesterol ($P=0.000$) and atherogenicity index ($p=0.004$).

Conclusion: Our results show that dyslipidemias are common in patients with chronic kidney disease. Chronic glomerular diseases which remain a major cause of CKD and usually associated with significant albuminuria contributes to these lipid abnormalities.

Keywords: CHRONIC KIDNEY DISEASE, LIPIDS

Abstract TPO 6:

**QUALITY OF SLEEP AMONG HYPERTENSIVE PATIENTS IN A SEMI-URBAN
NIGERIAN COMMUNITY: A PROSPECTIVE STUDY**

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Background: Sleep complaints are common in patients with chronic medical disorders; however, the prevalence of “poor sleep” in patients with chronic hypertension is not yet known in Nigeria. In the general population, insomnia negatively impacts quality of life. The objective of this study was to examine the quality of sleep among Nigerian hypertensive patients.

Objective: The study aimed to measure the prevalence of “poor sleep” in hypertensive patients and to examine the association between quality of sleep and the severity of hypertension in this population.

Methods: Quality of sleep was measured using the Pittsburgh Sleep Quality Index (PSQI) in chronic hypertensive patients attending a tertiary hospital in Nigeria. This was compared with normal control subjects.

Results: The mean age of the hypertensive patients was 58.15 ± 9.65 years (range, 19–76 years). This did not differ from the controls at 58.7 ± 10.8 years. A total of 80 (60.6%) respondents were females with a mean age of 58.3 ± 12.2 years while 52 (39.4%) were males with a mean age of 58.8 ± 11.7 years. The mean body mass index (BMI) was 26.42 ± 4.13 kg/m² (range, 18.9–36.4 kg/m²), with 63.1% of the respondents being either overweight or obese. The mean systolic blood pressure was 167.4 ± 21.8 mm Hg (range, 100–210 mm Hg) while the mean diastolic blood pressure was 96.7 ± 14.9 mm Hg (range, 60–130 mm Hg). Fifty-six (42.4%) hypertensive subjects were “poor sleepers” (global PSQI > 5), with a global mean PSQI of 5.03 ± 3.28 . This was significantly more than 17.3% of control subjects, with a mean global PSQI of 3.10 ± 0.83 . Among the hypertensives, there was no statistically significant relationship between the global PSQI and the age ($P = 0.653$), sex ($P = 0.710$), BMI ($P = 0.253$), systolic ($P = 0.145$), and diastolic blood pressure ($P = 0.827$).

Conclusions: Poor sleep is common in hypertensive patients and may be associated with lower health-related quality of life. Large-scale, prospective, longitudinal studies on quality of sleep in hypertensive patients are needed to confirm the high prevalence of impaired quality of sleep in this population, and to examine the association between severity of hypertension and quality of sleep while controlling for potential confounding variables. We hypothesize that severity of hypertension directly influences quality of sleep, and poor quality of sleep may worsen hypertensive conditions.

Keywords: SLEEP QUALITY; HYPERTENSION; INSOMNIA; NIGERIA; BLACK POPULATION

Abstract TPO 7:

CASE REPORT – CEREBRAL VENOUS THROMBOSIS IN A CHILD WITH NEPHROTIC SYNDROME

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Nephrotic syndrome is associated with several complications among which are thrombo embolic phenomena. These are uncommon in children.

This report describes an 8 year old male child with relapse of steroid resistant minimal change nephrotic syndrome who developed cerebral sagittal and transverse sinus thromboses.

He presented with headaches, vomiting and photophobia; and developed VI cranial nerve palsy during the course of the illness. Diagnosis was made by Computed Tomographic Scan and Magnetic Resonance Angiography of the brain.

He is being treated with low molecular weight heparin and has recovered without neurological deficits from the venous thromboses.

Keywords: NEPHROTIC SYNDROME, STEROID RESISTANT MINIMAL CHANGE, SAGITTAL AND TRANSVERSE SINUS THROMBOSES, LOW MOLECULAR WEIGHT HEPARIN

Abstract TPO 8:

AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASES PATTERNS IN BLACK AFRICANS: A TEN YEARS RETROSPECTIVE STUDY FROM SENEGAL

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Introduction: Autosomal dominant polycystic kidney disease (ADPKD) is not well described in black Africans. Some previous data suggested the disease is exceptional in this racial group [1,2].

Patients and Method: A retrospective and descriptive study of patients with ADPKD followed between 1995 and 2005 in a teaching hospital in Dakar. Diagnosis of ADPKD was based on clinical and ultrasound criteria.

Results: Prevalence of ADPKD was one in 250. Mean age was 47 ± 5 year with a predominance of male (57%). High blood pressure (HBP) was present in 68% of patients. Other renal manifestations were flank pain, hematuria and proteinuria. Two third of patients had impaired renal function at time of diagnosis with 15 end-stage renal disease (ESRD) cases. Extra-renal cysts were essentially found in liver (45,5%), pancreas and seminal vesicles. Main complications were ESRD (51%) occurring within a 6 year mean period, urinary tract infection (13%) and cerebral haemorrhage (2%). For the majority of cases, control of HBP required association of more than 2 antihypertensive drugs. Ten patients had been on haemodialysis and four others died from uremia complications.

Conclusion: ADPKD in black Africans is not as rare as reported before but probably underdiagnosed. Early HBP and ESRD are likely more frequent than in other races [3]. Presymptomatic ultrasound detection and early nephroprotection strategy should be more proposed to at-risk individuals to improve outcomes.

Keywords : AUTOSOMAL POLYCYST KIDNEY DISEASE – BLACK AFRICANS

Abstract TPO 9:

RARITY OF IGA NEPHROPATHY AND MOST IGA ASSOCIATED HLA ALLELES IN BLACK AFRICANS IN KWAZULU-NATAL (SOUTH AFRICA)

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Background: Immunoglobulin A (IgA) associated nephropathy is reported to be one of the most common primary nephropathy worldwide. Various HLA antigens including HLA A33 have been reported to be associated IgA nephropathy.

Aim: To investigate the prevalence and association of various HLA alleles commonly associated with IgA nephropathy in KwaZulu-Natal patients according to race.

Methods: We have retrospectively investigated the prevalence of various HLA antigens in KwaZulu-Natal patients with IgA nephropathy using the renal database at Inkosi Albert Luthuli Central Hospital. We have

also prospectively performed tissue typing using molecular techniques on patients known with IgA nephropathy. Prevalence of HLA alleles including HLA A2, A33, B12, Bw35, Bw44, Bw54, DR4 reported to be associated with IgA nephropathy elsewhere were reviewed in our patients according to race. Statistical analysis was performed with Instat3 program (Graphpad^R).

Results: While out 98 patients reviewed, IgA nephropathy represented 23 % of glomerulonephritides in Indians, and 25% in Whites, it was not found in Africans (0%). In Africans, the frequencies of selected HLA alleles are as follows: HLA A2(19%), A33 (0%), B12 (1%), Bw35(5%), Bw44(10%), Bw54(0%), DR4(6%). In KwaZulu-Natal patients, IgA nephropathy was positively associated with HLA-A33 in Indians ($p<0.049$)

Conclusion: IgA nephropathy is rare among Africans in KwaZulu-Natal. HLA-A33 a possible disease susceptibility marker for IgA nephropathy in Indians in KwaZulu-Natal is not present in Africans and might be responsible for the rarity of IgA nephropathy in Africans

Abstract TPO 10:

RENAL INSUFFICIENCY AND HEART FAILURE – RISK FACTORS, PATTERN AND OUTCOME IN A TROPICAL PEDIATRIC POPULATION

Adekanmbi AF, Ogunlesi TA, Alebiosu CO and Olowu AO

Introduction: In congestive cardiac failure (CCF), renal perfusion and renal dysfunction may affect outcome. The aim of the study was to describe the pattern of renal dysfunction in pediatric patients with CCF and investigate the postulate that the dysfunction is a predictor of morbidity and mortality.

Methods: One hundred and four newly diagnosed consecutive hospitalized pediatric patients with CCF admitted over a one year period formed the study population. Renal functions were determined before and after therapy. Correlation was determined using Pearson's correlation coefficient and significant risk factors were determined by multiple regression analysis.

Results: There were 51(49.1%) males and 53(50.9%) females. The mean age was 2.0 ± 3.1 years with a range of 1 day to 14 years. The mean duration of disease was 14.89 ± 45.6 days. The mean serum levels of Na, K, Urea, HCO₃ and Creatinine were 129.0 ± 55.1 mmol/L, 4.0 ± 0.82 mmol/L, 47.6 ± 58.9 mmol/L 20.5 ± 3.8 mmol/L and 0.95 ± 1.89 mmol/L respectively. Hyponatraemia, hypokalaemia, metabolic acidosis, elevated urea and creatinine were found among 16(15.3%), 4(3.8%) 24(23%) 32(30.7%) and 3(2.9%) subjects respectively. Twenty seven cases (Case Fatality Rate 25.9%) out of 104 subjects died. There were no significant differences in the mean serum levels of the electrolytes between survivors and the fatalities. Using multiple regression analysis, elevated serum creatinine was a significant risk factor for death in CCF ($p=0.0388$) while hypokalaemia was not ($p=0.2000$).

Conclusion: Children with CCF commonly had azotaemia among Nigerian Africans. Serum Creatinine was a risk factor for death.

Abstract TPO 11:

DISTRIBUTION OF ULTRAFILTRATION, AND ITS EFFECT ON WEIGHT AND BLOOD PRESURE IN PATIENTS UNDERGOING HAEMODIALYSIS AT UNIVERSITY OF PORT HARCOURT TEACHING HOSPITAL, PORT HARCOURT

Okafor UH, Eneyo WS, Chinda IN, Fibriesima AJ, Odidi VI and Wokoma FS

Objectives: To determine the frequency of ultrafiltration, and its effect on the patient's weight and blood pressure.

Materials and Methods: This is a retrospective study. The medical records of patients presenting for haemodialysis at renal unit of UPTH Portharcourt from 1st January to 30th June 2008 were retrieved. The biodata, ultrafiltration volume, predialysis weight, post dialysis weight, pre dialysis BP, post dialysis BP were retrieved. The mean UF, pre dialysis weight and BP, post dialysis weight and BP were computed. The difference between the pre and post dialysis parameters was documented. The data obtained were entered into a spread sheet, and then analysed using SPSS Vs 13.0.

Results: Forty patients were dialysed during the period under study. Twenty one patients (72.5%) had ultrafiltration. The ultrafiltration volumes were ≤ 1000 ml in 22.5% patients and > 3000 ml in 30% of patients. Patients with ultrafiltration volume of ≤ 1000 ml lost 0.65kg, and patients with ultrafiltration volume > 4000 ml lost 5.0kg. p value was 0.046. The change in systolic blood pressure was -3.5mmHg in UF ≤ 1000 ml and -30.0mmHg in UF > 4000 ml, p value was 0.177. The diastolic blood pressure was 3.0mmHg in UF ≤ 1000 ml and -10mmHg in UF > 4000 ml. p value is 0.506.

Conclusion: Most of the patients presenting for haemodialysis are usually fluid overloaded and this accounts for the high frequency of ultrafiltration. Ultrafiltration causes reduction in weight of patient but does not affect the blood pressure significantly.

Abstract TPO 12:

PATTERN OF RENAL DISEASE AMONG PATIENTS WITH CHRONIC RENAL FAILURE – A 4 YEAR REVIEW

Okafor UH, Onwuchekwa UN, Unuigbo EI and Ojogwu LI

Objectives: To highlight the pattern of renal disease in patients who died from chronic renal failure.

Material and Patient: This is a retrospective study. The case files of CRF patients who died between 1st January 2002 and 31st December 2005 were retrieved and medical details of the patients were recorded and analysed using SPSS Vs 13.0.

Results: A total of 87 patients died within the period under study (2002 – 2005). Fifty-nine (67.8%) were males; the mean age was 42.5 ± 16.4 years. Students, traders, and civil servants were the most affected. Uraemic encephalopathy and pulmonary oedema were the commonest clinical presentation. Chronic glomerulonephropathy and hypertensive nephrosclerosis were the commonest kidney disease. There is increasing age of patients dying from CRF within the period under study, 37.7years in 2002 and 45.5 years in 2005.

Conclusion: The burden of CRF is more in young adult, low socio-economic status and the males. CGN and hypertensive nephrosclerosis remains the commonest cause of CRF in our population.

Abstract TPO 13:

RATIONALE FOR CYTOTOXIC CHEMOTHERAPY IN NEPHROTIC SYNDROME IN ABSENCE OF PATHOLOGICAL DIAGNOSIS

Okafor UH, Wokoma FS, Emem- Chioma P, Okojaja A R, Bell – Gam H and Alasia DD

Objectives: To highlight the use of cytotoxic chemotherapy in nephrotic syndrome in absence of pathological diagnosis.

Case Summary: A 21 years old man admitted in nephrotic syndrome with gross ascites and oedema affecting the lower limbs, forearm, sacral, anterior abdominal wall, trunk and facial. Investigations were consistent with nephrotic syndrome. He was commenced on diuretics, lisinopril, antiplatelet but there was no significant response. He also did not respond to haemofiltration, salt poor albumin and later prednisolone. He was later commenced on cytotoxic therapy to which he had prompt and remarkable response.

Conclusion: In the absence of pathological diagnosis in diuretic and steroid resistant nephrotic syndrome, cytotoxic chemotherapy can be tried if there is no contraindication.

Abstract TPO 14:

**“FULL HOUSE” COMPLICATIONS OF TYPE 2 DIABETES IN A NIGERIAN WOMAN :
CASE REPORT**

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The challenge of management of a 64 year old Nigerian woman with type 2 diabetes, severe hypertension and nephrotic proteinuria with normal kidney function is presented. Prior to review, she had undergone bilateral laser photocoagulation for proliferative retinopathy. After 4 years of follow up, she developed associated heart disease and left hemiparesis from cerebrovascular disease with brain scan revealing massive right hemispheric infarct. Nevertheless, she remained fully conscious and well aware. Her kidney histology showing diffuse glomerulosclerosis and vascular disease involving both the afferent arteriole and large renal artery is also presented. The need for multidisciplinary/multicentre collaboration for effective evaluation and management is also highlighted.

Abstract TPO 15:

**KIDNEY DYSFUNCTION IN PATIENTS WITH SICKLE CELL DISEASE (SCD): A
RETROSPECTIVE REVIEW**

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Background: Sickle cell disease (SCD), a disease of blacks often presents with disabling acute complications which could be occasionally fatal. Its renal manifestations are increasingly being recognized as affected patients now survive to middle and rarely old age. Reports on kidney dysfunction in SCD in our environment have focused mainly on tubular abnormalities hence this retrospective review.

Aim & Objectives: We retrospectively reviewed our SCD patient population with a view to uncovering the major renal manifestations and its predictive factors. We also attempt to ascertain the contributions of renal disease to mortality.

Materials and Methods: We reviewed the available case records of SCD patients managed in our hospital. Information on age of patients, age at diagnosis, number and types of crises, number of units of blood transfusions received and presence of uraemic features or frothiness of urine were retrieved. Investigation results ranging from urinalysis, serum chemistry, urine microscopy, serological status and clinical outcomes were also collated. Renal disease was defined as elevated serum creatinine above 132 $\mu\text{mol/L}$ and / or presence of at least 1+ proteinuria on dipstick. Data was analysed using SPSS package version 13.

Results: A total of 376 case records were reviewed but only 374 (99.46%) had complete data. Their ages ranged between 7 and 62 years (Median; 23 years) (Mean \pm SD; 24.16 \pm 7.57yrs), There was a slight female preponderance with 189 (50.5%) of them being females. Age at diagnosis of SCD ranged between 3 months and 31 years (median ; 4 years). The median number of crises was 6 (range 1-37 episodes). 294 (78.6%) had HbSS while 77 (20.6%) had HbSC and only 2 (0.5%) had HbCC disease. There was no relationship between the genotype and propensity for renal disease ($p=0.467$). Systolic and diastolic blood pressures ranged between 60-190 mmHg and 30-130mmHg respectively, only 10 patients had hypertension, 4 had both systolic and diastolic HT while 2 and 4 patients had isolated systolic and diastolic HT respectively. 257 (68.7%) had no evidence of renal disease while the remaining 117 (31.3%) had either proteinuria or elevated serum creatinine or both. 63 (16.8%) had proteinuria, 42 (11.2%) had a combination of proteinuria and elevated serum creatinine while the remaining 12 (3.2%) had isolated elevation of serum creatinine. 4 of the patients were HBsAg positive out of which only 2 had renal disease, only 1 had anti HCV antibodies and only 1 was HIV positive ($P>0.5$). The ages of patients was a significant predictor of kidney disease being significantly higher in patients with kidney disease ($P=0.002$) while the age at diagnosis was not significantly different. The PCV was significantly lower in those with kidney disease while the ESR was significantly higher in them. Patients with kidney disease had significantly higher number of crises / hospitalisations. Seven patients died in all and 4 (75%) of them had end stage renal disease (Fisher's exact test, $P=0.000$).

Conclusion: Kidney disease is a common complication of SCD and significantly contributes to mortality. Age of the patients and/or duration of SCD are a strong predictors of development of kidney disease.

Abstract TPO 16:

MULTIPARAMETRIC ASSESSMENT OF THE NUTRITIONAL STATUS OF A SAMPLE OF NIGERIAN PATIENTS WITH CHRONIC KIDNEY DISEASE

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Background: The nutritional status of patients with chronic kidney disease is an important determinant of the morbidity and mortality associated with the disease. In the absence of a cure for chronic kidney disease, one of the major aims of treatment is to improve the functional status and quality of life of affected patients. The nutritional status of our patients with chronic kidney disease and the best nutritional assessment tool remain largely undetermined.

Objectives: The study evaluated the baseline nutritional status of a sample of patients with chronic kidney disease using several parameters. The ability to detect malnutrition using the various nutritional assessment tools was compared.

Materials and methods: A total of 62 consecutive patients with chronic kidney disease being treated at the renal unit of National Hospital, Abuja were enrolled into the study. Nutritional status was assessed by the use of Subjective global assessment (SGA), a tested and verified nutrition assessment tool. Other objective nutritional parameters used include weight change over six months of follow up, Body Mass Index (BMI), Triceps skin fold thickness (TSF), mid upper arm circumference (MUAC) and Serum Albumin. Data obtained were analyzed using the EPIINFO 6.04 integrated statistical software for health and epidemiological research.

Results: Malnutrition was seen in more than 54% of the patients studied based on SGA criteria, 41.9% based on weight loss over six months, 48.4% based on MUAC, 17.7% based on BMI, 85.5% based on TSF, 24.2% based on Serum Albumin and 69.4% based on two or more criteria. The serum albumin underestimated patients with malnutrition when compared to the SGA.

Conclusion: The incidence of malnutrition in our patients with chronic kidney disease is high. Efforts at detecting early malnutrition, as well as correcting factors associated with malnutrition in such patients, will hopefully improve their functional status.

ACUTE RENAL FAILURE AND TOXIC NEPHROPATHIES

Abstract TPO 17:

ACUTE RENAL FAILURE IN HIV – AN OUTCOME STUDY

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Background: HIV positive patients who develop severe acute or acute on chronic renal failure often require intensive care and a renal biopsy to determine the cause and prognosis of renal failure. The requirement for dialysis therapy heralds a poor prognosis.

Objectives: To describe the presentation, renal diagnoses and outcome of HIV positive patients who have undergone acute haemodialysis therapy for severe renal failure at Groote Schuur Hospital in the period 2002 – 2007.

Methods: Retrospective review of case notes and laboratory results of HIV positive patients who were dialysed acutely for renal failure.

Results: One hundred and seventeen patients were reviewed with a mean age of 36.1 +/- 11yrs (Range 16 - 75). There were 53.8% males and 93.2% were Black African patients. Mean CD4 count was 123 +/- 138 (Range 3-574) and mean creatinine at the start of haemodialysis was 1021+/-478 umol/l (Range 162 – 2607umol/l). A clinical diagnosis of ATN was made by a nephrologist in 68 patients (58.1%). There were 59 cases of sepsis causing ATN. Rhabdomyolysis, gentamycin toxicity, tumour lysis syndrome, and HELLP syndrome caused ATN in the 9 other patients. A histological diagnosis of HIVAN was made in 22 out of 33 patients. Concurrent histological findings of malignant hypertension, renal TB, glomerulonephritis, ATN, acute interstitial nephritis, pyelonephritis and CMV interstitial nephritis were found in ten cases of HIVAN.

Other biopsy proven diagnoses were glomerulonephritis, ATN, malignant hypertension, acute interstitial nephritis, diabetic glomerulosclerosis, and renal lymphoma. The renal diagnoses remained uncertain in 16 patients. The average length of stay in hospital was 16.8 days with an average of 9 dialysis dependant days. Fourty-eight patients (41%) died during hospitalization. Thirty patients (26.5%) remained dialysis dependant at discharge. Thirty nine patients (33.3%) survived the hospital period and were considered independent of dialysis at discharge.

Conclusions: HIV patients who need acute dialysis therapy have an overall poor prognosis. ATN due to sepsis, especially with advanced AIDS causes the greatest burden of disease and is a predictor of poor outcome in this group. HIVAN is a histological diagnosis that can occur concurrently with other acute and chronic insults to the kidney. A renal biopsy is indicated in severe renal failure when the diagnosis of ATN is in doubt.

Abstract TPO 18:

REPEAT EPIDEMIC OF DIETHYLENE GLYCOL POISONING AMONG NIGERIAN TODDLERS – IBADAN EXPERIENCE

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Introduction: The first episode of diethylene glycol poisoning (DGP) in Nigeria was reported in Ibadan among toddlers who ingested paracetamol syrup that was constituted with diethylene glycol in 1991. The same error has recurred with a teething mixture resulting in many toddlers presenting in acute kidney failure between October and November 2008.

Aims and Objectives: To highlight the peculiar clinical features, management difficulties and outcome of acute kidney failure following DGP at the University College Hospital Ibadan.

Methodology: All patients who were admitted in our centre with anuria and who had positive history of ingestion of “My Pikin” teething powder were studied. The clinical evaluation, biochemical and haematological investigations, and other management of the patients are reviewed.

Results: Thirteen patients, 8 boys and 5 girls, age range 4-36 months, mean 13.8 ± 6.9 months presented at Otunba Tunwase Children Emergency Ward, University College Hospital, Ibadan; one was brought in dead, two refused admission because of lack of peritoneal dialysis (PD) fluids, and 10 were admitted. All the children presented with fever and anuria, the duration of the anuria ranged from 2 -7 days. Other common features were vomiting, hepatomegaly and encephalopathy. Cough, respiratory distress and hypertension were also notable features. They were all in renal failure on admission. Elevated anion gap metabolic acidosis was present in all. Intravenous ethanol was given to two patients as the preferred fomepizole was not available. Only seven patients were dialysed as two were discharged against medical advice because of lack of PD fluids and another one died before the items for dialysis could be assembled. Their dialysis cycles ranged from 5-72 with 4 patients making urine and having significant reduction in the urea levels but the seven eventually died. The terminal events were encephalopathy and respiratory failure. Investigations were hampered by lack of electric power supply during that period.

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Conclusion: The outcome of diethylene glycol poisoning is affected by the quantity ingested, the prompt use of the antidote and haemodialysis. The late presentation of the patients, non-availability of appropriate antidotes and lack of facilities for haemodialysis resulted in very poor outcome. Policies should be put in place so that this error does not reoccur.

DIALYSIS AND TRANSPLANTATION

Abstract TPO 19:

HAEMODIALYSIS EXPERIENCE IN RETROVIRAL POSITIVE RENAL DISEASE PATIENTS: A PRELIMINARY REPORT FROM BENIN CITY, NIGERIA

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Background: In the developed parts of the world renal disease patients, regardless of their retroviral status, have always been granted ready access to haemodialysis (HD) therapy when needed. However, in the Nigerian setting, prior to the commencement of Government sponsored Highly Active Antiretroviral Therapy (HAART) to retroviral positive patients in June, 2003, those needing dialytic therapy were usually denied access to HD. Haemodialytic therapy to such patients only became available in our centre (UBTH) from January, 2007 and our experience with such patients, in terms of patient characteristics and outcome, is here presented.

Methods: The case records of all patients who had HD over a 20 month period, beginning from January 2007, were reviewed. Data sought for analysis included biodata, retroviral disease status, clinical and laboratory data.

Results: A total of 73 retroviral disease (RVD) patients (32M, 41F) had HD therapy over the period, representing 19.47% of all dialysed patients (375). Fourteen (19.18%) of these RVD patients had acute renal failure while the others were dialysed because of chronic kidney disease (CKD) related uraemia. Patients had a mean age of 39.22 ± 10.82 yrs and PCV of $21.06 \pm 4.96\%$. Mean Systolic BP was 145.74 ± 25.39 mmHg while Diastolic BP was 88.03 ± 14.92 mmHg. The number of HD sessions/patient ranged from 1-19. Only 2 patients received a minimum of 2 HD sessions / wk beyond a 4 week period. During the period under review, 4 patients (5.48%) were confirmed still alive, 21 dead (28.77%) and others were lost to follow up. The observed drop out rate from HD was not much different from that seen amongst retroviral negative patients.

Conclusion: A high percentage of retroviral positive Nigerians requiring RRT are unable to afford adequate HD on the long term, with the attendant high mortality. However, on a short term basis, there is no strong evidence as yet to justify any adoption of a differential approach, with regard to HD access, between retroviral positive patients on HAART and retroviral negative patients.

Abstract TPO 20:

RENAL OSTEODYSTROPHY AMONG SENEGALESE PATIENTS ON HAEMODIALYSIS

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Introduction: Renal osteodystrophy (RO) or chronic kidney disease-mineral and bone disorders (CKD-MBD) is a worldwide challenge for hemodialysed patients. In Senegal, prevalence and incidence of dialysed

patients are increasing but a few data are available about their bone disorders. Our aim was to describe patterns of RO in Senegalese dialysed patients.

Patients and Method: We performed a retrospective study including all patients who had been dialysed in our centre from february 1988 to march 2008. Clinical, biological and radiological data and dialysis parameters were collected from records.

Results: Prevalence of overall CKD-BMD was 45 % (n=57 patients). Mean age of patients was 48.3 years (20 – 70 years) and sex-ratio M/F was 1.35. Mean duration on hemodialysis was 45 months (04-180 months). The majority of patients had any medical insurance. Secondary hyperparathyroidism was the most frequent disorder followed by adynamic bone disease and osteomalacia. The main clinical, biological and radiological findings are represented in table I.

Table 1: Manifestations of different types of renal osteodystrophy

	HPT (n=40)	ABD (n=16)	OM(n=01)
Clinical manifestations			
- Bone pain	06	03	01
- Pruritus	11	09	01
- Peripheral neuropathy	10	02	00
Biological manifestations (mean values and extremes)			
- Calcemia (mg/l)	86 (76-92)	90 (88-97)	89
- Phosphoremia (mg/l)	2.25	1.98	1.53
- Alkaline phosphatases (UI/l)	250 (142.5-616)	120 (40-290)	35
- Parathormone level ng/l	684 (547-793)	60.5 (27-172)	98
- Hemoglobine	8.9 (5.8-11.6)	10.2 (6.5-12)	9.8
Radiological abnormalities			
- Fractures	02	02	00
- Diffuse demineralisation	14	06	01
- Subperiostal resorption	03	00	00
- Extraskkeletal calcifications	03	02	00

HPT= hyperparathyroidism; ABD= adynamic bone disease; OM= osteomalacia

No bone biopsy was performed because histomorphometry was not available in our country. Management of HPT included optimisation of dialysis parameters (100% of patients), calcium phosphate binders (65% of patients), sevelamer (04%), lanthanum (02%), and 1-alpha-calcidol (% of patients) while treatment of ABD and OM relied on calcium phosphate binders (50% of patients), oral vitamine D analogs (02%). Three patients with HPT required surgery. Evolution was favourable for the majority of patients. However, the K/DOQI recommended levels calcemia, phosphatemia and PTH were not achieved in one third of patients. Three patients died from cardiovascular events.

Conclusion: Renal osteodystrophy is frequent and dominated by high turn-over disease in our hemodialyzed patients. Clinical and paraclinical manifestations are often not specific and long term treatment is difficult in context of patients with low economic incomes.

Keywords: RENAL OSTEODYSTROPHY, HEMODIALYSIS, SENEGAL.

Abstract WPO 21:

MANAGEMENT AND OUTCOMES OF VASCULAR ACCESS FOR HAEMODIALYSIS IN SENEGAL

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Introduction: Good vascular access (VA) is an imperative for hemodialysis practice. Currently, different VA are available for patients but they can sometimes expose to life-threatening complications. The objective of our study is to describe clinical patterns of VA of patients undergoing chronic hemodialysis in Senegal.

Patients and method: A descriptive study of hemodialysed patients from January 1997 to May 2007 at the three main dialysis centre in Dakar. Data about patients and their VA was collected from medical dialysis records. Statistical analysis was done with Epi info 6.0.

Results: We included 68 patients. Mean age was 51.6 ± 12 years (24-76 years) and sex ratio 1.17. The primary VA used for first dialysis was a temporary catheter in 82 % of cases and native arterio-venous fistula for 18 % of patients. Mean duration of the first central venous catheter was 53 ± 14 days (7-182 days). Prevalence of infectious complications was 6.5 and 0.6 per 1000 days-patients respectively for temporary and permanent VA. Femoral position (OR = 1.012; p = 0.003) and duration of catheter (OR = 1.85 ; p < 0.001) were associated with high risk of infection. Other complications of VA were thrombosis (2.2 per 1000 days-patients) and local bleeding (1.5 per 1000 days-patients). Three deaths were directly imputable to VA (2 cases of severe sepsis and 1 compressive neck hematoma).

Conclusion: Good management of vascular access is a key point for dialysis quality. First hemodialysis is not scheduled for the majority of our patients because of late referral to nephrologists and initial VA is generally a temporary catheter placed in emergency. Main complications are infections and thrombosis.

Keywords : VASCULAR ACCES, HEMODIALYSIS, SÉNÉGAL

Abstract WPO 22:

QUALITY OF LIFE (QOL) IN AMBULATORY HAEMODIALYSIS (HD) AND PERITONEAL DIALYSIS (PD) PATIENTS IN GROOTE SCHUUR HOSPITAL SOUTH AFRICA USING THE KDQOL-SF 1.3 QUESTIONNAIRE

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Background: Haemodialysis (HD) and peritoneal dialysis (PD) are important renal replacement treatment in end stage renal disease (ESRD). The comparison of quality of life (QOL) between these two modalities in Africa is lacking. Therefore, we compared the two modalities in a single-centre study.

Methods: Demographic information and biochemical variables were obtained from consenting HD and PD subjects attending the GSH Dialysis units. The KDQOL-SF 1.3 questionnaire which includes 43 kidney-disease targeted items as well as 36 items that provide a generic core and an overall health rating item was administered to the subjects. Responses obtained from the tool were graded and scored and an ESRD-related QOL score, an SF-36 QOL score and a total QOL score were obtained from each subject. Statistical analysis of the data was performed with the SPSS statistical software (version 10.1).

Results: Although QOL scores were higher in PD subjects, there was no difference in ESRD, SF-36 and total QOL scores between HD and PD subjects. Total QOL score in all the subjects was inversely and significantly correlated with smoking ($p=0.045$), number of medications taken ($p=0.007$) and occupation ($p=0.007$). ESRD-related QOL score in HD patients was also inversely and significantly correlated with serum phosphate (-0.526 ; $p=0.036$) and the calcium x phosphate (CXP) product (-0.586 ; $p=0.017$). In PD patients, total QOL score inversely correlated with previous history of transplantation (-0.0651 ; $p=0.022$) and occupation (-0.0596 ; $p=0.041$). These results were comparable to a recent similar study in North America.

Conclusion: The KDQOL-SF 1.3 questionnaire has shown no significant difference in QOL between South African HD and PD patients. However, to improve the overall QOL in the dialysis population, factors such as hyperphosphataemia, high CXP and number of medications used in patient treatment will require attention. Our findings suggests that PD is a practical dialysis option in the developing countries of Africa where there are serious financial constraints to carry out haemodialysis.

Abstract WPO 23:

POST RENAL TRANSPLANT POLYCYTHEMIA : A REPORT OF 2 CASES AND REVIEW OF LITERATURE

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Background: Post transplant polycythemia or erythrocytosis (PTE) is increasingly recognized as a complication of kidney transplantation. Post transplant erythrocytosis is defined as hematocrit above 51% in transplant recipients. It is a well recognised condition with multiple aetiologies affecting 10 to 17% of patients with excellent allograft function and occurs predominantly during the first 3 years after transplant. In our follow up of ten transplant patients in the University College Hospital, Ibadan PTE has been diagnosed and is being managed in one.

Methods: A report of 2 patients presenting with post renal transplant polycythaemia in UCH. The medical report of the patient and relevant literature was reviewed.

Results: We report 2 cases of post transplant erythrocytosis in a 34 year old patient who developed post transplant erythrocytosis 6 months after successful transplant, his hematocrit rose to 57% with rising urea and creatinine. With the reduction of his dose of cyclosporine, addition of angiotensin converting enzyme inhibitor, optimal blood pressure management and serial phlebotomies, his packed cell volume (PCV) reduced to 41%, urea returned to normal range (35mg/dl) and his creatinine dropped from 2.7mg/dl to 1.0mg/dl.

Conclusion: With the proposed increase in renal transplant rates across the country, Post renal transplant polycythemia is a complication to look out for especially in those on cyclosporin like our patient. This will prolong allograft survival and improve outcomes generally.

Abstract WPO 24:

SHOULD ANTIHYPERTENSIVE DRUGS BE ADMINISTERED PRE-DIALYSIS TO MAINTENANCE HAEMODIALYSIS PATIENTS?

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Background: Haemodialysis induced hypotension is quite common with acetate dialysis on account of which antihypertensive administration pre dialysis is usually discouraged. Hypertension on the other hand used to be rare on acetate dialysis and complicates only 3% of HD sessions in our series. Since commencement

of bicarbonate dialysis in our centre 6 years ago the prevalence of dialysis induced hypertension had steadily increased.

Objective: To determine the pattern of occurrence of hypertension as well as its variations during the course of HD.

Methods: The data retrieved from patients dialysed between 1st January 2007 to 31st December 2007 were reviewed. Patients that had HD for longer than 3 months were selected and pattern of blood pressure changes in them studied.

Results: A total 105 patients had 664 sessions of HD during the period. Twelve of them had dialysis sessions for longer than 3 months accounting for 11.43%. Ten of these patients were recruited and the pattern of blood pressure changes during dialysis studied. Nine of them had a rise of between 10 - 30mmHg in systolic BP while the rise in diastolic BP ranged between 5 - 15mmHg. Two of the patients had parenteral antihypertensive for symptomatic hypertensive encephalopathy. One patient reverted back to normotension without therapy.

Conclusion: Dialysis induced hypertension is common in maintenance HD patients on bicarbonate dialysis. Routine pre-dialytic administration of antihypertensive drugs should be encouraged in such patients.

Abstract WPO 25:

THE CHALLENGES OF RENAL REPLACEMENT THERAPY IN A POOR SOCIETY: THE AHMADU BELLO UNIVERSITY TEACHING HOSPITAL EXPERIENCE, ZARIA

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Introduction: Ahmadu Bello University Teaching Hospital is situated in the Guinea Savannah region of Northern Nigeria. Poverty rate is high with over 60% of the population living on less than \$1 a day. Severe renal failure is not uncommon in the region and renal replacement therapy is the only viable option for improving the clinical outcome in these patients. Haemodialysis and peritoneal dialysis were made available in A. B. U. Teaching Hospital in November 2005. These services are very expensive and a session of haemodialysis costs about \$150. Only very few people can afford long term maintenance haemodialysis at this cost. Renal transplant services are only available in very few centers within the country but donors are hardly available and the cost is also beyond the reach of even the above average in the society.

Objectives: The objective of this paper is to look at the service in A. B. U. Teaching Hospital and evaluate the extent to which clinical outcome of patients has improved and possible factors that impede the service.

Methods: Records of all patients referred to the nephrology unit during the period of 1st January 2006 to 31st December 2008 were reviewed. Those noted to have required renal replacement therapy were selected for analysis.

Results: Three hundred and fourty six persons were found to have had severe renal failure that required renal replacement and were offered the options available. Only 138 patients (39.8%) accepted to start therapy. All 138 patients preferred to start with Haemodialysis. Ninety six (63.4%) that started dialysis dropped out of the program within three months of starting, mainly due to lack of money to continue. Fourty two patients dialyzed for more than three months but only 12 have dialyzed for more than one year. Two hundred and eight persons could not have dialysis because they could not afford the cost of starting the procedure. Only 4 patients have had transplant because of the difficulty of raising enough funds for the

transplant and the difficulty of getting suitable donors. Almost all our patients presented late to hospital, making planned dialysis impossible. All were taken in on emergency requiring temporary vascular access and burdened with complications and co morbidity that affected clinical outcome. The major co morbidities were cardiovascular diseases such as hypertension, cardiac failure, cerebrovascular disease and diabetes. Frequent breakdown of equipment with delays in repairs had a negative impact on the overall outcome.

Conclusion: We conclude that poverty, late presentation, high cost of service, inadequate machines and lack of adequately trained technical manpower negatively impact on renal replacement therapy in A. B. U. Teaching Hospital Zaria. This diminishes the expected improvement in the clinical outcome. Prevention therefore remains the best option for the poor countries to tackle the problem of end stage renal disease.

Keywords: HAEMODIALYSIS, HIGH DROP OUT RATE, LATE PRESENTATION, POOR OUTCOME, POVERTY, PREVENTION

Abstract WPO 26:

ANAEMIA RESPONSE TO INTRAVENOUS IRON THERAPY IN HEAMODIALYSIS PATIENTS: A REVIEW OF 20 CASES

Babalola EAO and Adeleke TA

Background: Aneamia is present in the great majority of patients with chronic renal failure. it has been noticed that most heamodialysis patients have hematocrit of less than 25% (15-24%) whereas heamatocrit values above 25% in dialysis patients is generally preferable. Different factors have been associated with this whilst different approaches have been used to combat it including the use of intravenous iron therapy.

Objectives: To determine aneamia response to intravenous iron therapy.

Methods: A six week cross-sectional study of 20 patients who presented with chronic renal failure was carried out at the University College Hospital, Ibadan. Blood sample for hematocrit were taken before intravenous iron and at the end of 6 doses of intravenous iron which was administered at weekly visit.

Results: The mean hematocrit value at presentation was 22.7% while the mean hematocrit value after intervention like blood transfusion and administration of erythropoietin was 23.9% and 25.3% respectively. The mean hematocrit value after the administration of 6 doses of intravenous iron was 29.2%

Coclusion: The result obtained in this study suggests that administration of intravenous iron helps keep the hematocrit of patients having heamodialysis in a preferable range for the procedure.

Abstract WPO 27:

INTRA-DIALYSIS COMPLICATIONS AND EVENTS AT THE OWENA DIALYSIS CENTER, UNIVERSITY COLLEGE HOSPITAL, IBADAN

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Background: Haemodialysis remains the recommended treatment modality for end stage renal disease. Complications and events may arise during this procedure which may add to the morbidity and mortality of the condition, some of which may be unrelated to the procedure but still influence the outcome.

Aim: To determine intra-dialysis complications and events in CRF patients undergoing dialysis at the University College Hospital, Ibadan, highlighting related factors.

Methodology: Prospective record of information on patients having haemodialysis in the Unit between September 2006 and August 2007 were documented including age and sex, clinical diagnosis, presence of co-morbidities, level of consciousness, blood pressure at start of procedure, biochemical parameters and hematocrit. Data was analyzed using SPSS version 15, and a p value <0.05 was considered statistically significant.

Results: Three hundred and seventy eight patients on dialysis were seen during the period. The mean age was 43.5 years (SD = 19.0). There were more males (68.3%) than females (29.4%). Approximately 75% had chronic renal failure, 20.6% acute renal failure while 3.2% had acute on chronic renal failure. About 71.4% had no co-morbidities. The commonest co-morbidity was diabetes mellitus (11.4% patients), HIV infection (8.5%), malignancy (2.4%), liver disease (1.3%), hepatitis B infection (1.1%), congestive cardiac failure (0.85%), and sickle cell disease (0.3%). Vomiting was the commonest complication (15.1%) followed by hypotension (11.8%), rigors (9.8%), cardiac arrest (4.6%), pyrexia (4.2%), agitation (3.4%), chest tightness (2.1%), convulsions (1.6%), clotted cannula (0.8%) urticaria and ruptured dialyzer (0.3% respectively). There was a significant association with the development of hypotension of the following: presence of a co-morbidity, level of consciousness and number of times of dialyzer reuse. Those more likely to develop hypotension were those with ARF, co-morbidities, first dialyzer users, and those with lower levels of consciousness.

Conclusion: Vomiting and hypotension are the commonest intra-dialysis complications from this study, and it is recommended that patients with ARF, co-morbidities and those using a dialyzer for the first time should have prophylactic measures against hypotension instituted prior to, and during dialysis.

Abstract WPO 28:

NURSING CARE PLAN OF TRANSPLANTED PATIENTS IN O.A.U.T.H.C., ILE-IFE

Fajobi AO, Oshikoya TA, Olarinoye OF and Akoma IE

Introduction: Between 2002 till date eight (8) patients have been transplanted in Obafemi Awolowo University Teaching Hospital Complex. The Nursing problems identified in all of them are similar. We highlighted these problems to guide development of indigenous nursing care process. Presented are the Potential Nursing diagnosis identified in the eight patients, actual nursing problems, nursing intervention carried out the outcome.

Methodology:: The nursing care plan was developed for these problems:

1. Potential for Post Operative bleeding.
2. Potential for Fluid Overload/Dehydration
3. Potential for Electrolyte Imbalance.
4. Potential for Problems of immobility: Chest infection, Pressure Sore, Deep Vein Thrombosis leading to pulmonary embolism.
5. Risk for Infection due to Surgery Indwelling Catheter CVP line and immunosuppression.
6. Risk for Graft rejection.
7. Potential for Inadequate Nutrition.

Results: The Actual Problems observed in the patients are Fluid Overload 2 (25%), Delayed Graft function/ Graft rejection 3 (37.5%), Urine leakage 1(12.5%), Glycemic Instability 1(12.5%), Infection 2 (25%)

Anxiety (due to delayed graft function) 2 (25%), Anxiety (due to inability to sustain treatment) 4 (50%) and Depression (Psychosis) in 1 (12.5%) patient.

Conclusion: In planning nursing care for renal transplant patients, the following must be anticipated in view of the prevalence observed. Fluid Overload, Delayed Graft function/Graft rejection, Infection and Anxiety.

PREVENTIVE NEPHROLOGY

Abstract WPO 29:

KNOWLEDGE OF KIDNEY FUNCTION, DISEASE AND ITS RISK FACTORS AMONGST UNDERGRADUATES IN A NIGERIAN UNIVERSITY

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Background: Chronic Kidney Disease, a persisting and progressive impairment of kidney function now assumes epidemic proportion globally. Despite the lack of community based studies, hospital derived data and sentinel survey suggest that prevalence is increasing and approaching 1000 cases pmp in Nigeria. Unfortunately CKD in our environment affects young adults in their economically productive years who are ill able to afford the exorbitant cost of treatment. To be able to mount preventive strategies there is need for kidney health education and major risk factors promoting kidney disease.

Aim: We set out in this study to assess the baseline level of knowledge of kidney function, disease and its risk factors among undergraduates of OAU, Ile-Ife.

Methodology: This cross-sectional descriptive study was carried out in OAU. Pre-tested self administered questionnaire were distributed to students in their various halls, blocks and rooms using multistage sampling technique. Data retrieved was analysed using SPSS package.

Results: Of the 700 administered questionnaires, only 694 were returned. Majority of the respondents (88%) were younger than 25 years, only 0.1% was older than 30 years. 352 of them (50.7%) were males while females constituted 49.3%. Only 8.2% of the respondents demonstrated fair to good knowledge while a whopping 91.8% had poor knowledge of kidney function and disease. Of the risk factors for kidney disease, only 8.6% had fair to good knowledge, while the remaining 91.4% had poor knowledge. The attitude towards kidney disease was poor in 78.9% while it was good in 21.1%. We found that the knowledge of risk factors significantly influenced their health seeking attitude ($X^2=8.576$, $P=0.003$).

Conclusion: The knowledge of kidney health, features of kidney disease and its risk factors as well as attitude towards kidney disease are generally poor in the studied population. Kidney health education is necessary to positively change the health seeking attitude and behaviour in our undergraduates.

MISCELLANEOUS.

Abstract WPO 30:

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Aim: To develop a renal registry that will monitor renal epidemiology in the Caribbean and help determine the burden of disease.

Methods: Questionnaires were sent out to different Caribbean countries for distribution to the dialysis units. Data were obtained for patients with End Stage Renal Disease (ESRD) who were on long term renal replacement therapy in 2006. The demographic data, type of renal replacement therapy, laboratory data and causes of ESRD were obtained from the questionnaire. Data were analyzed using SPSS 11.0

Results: Data were reported from six English-speaking Caribbean countries: Bahamas (n = 211), Barbados (n = 185), British Virgin Islands (n = 27), Cayman Islands (n = 41), Jamaica (n = 366) and Trinidad and Tobago (n = 436). Haemodialysis was reported in all the countries; transplantation was not reported from the Cayman Islands. Only Bahamas, Jamaica and Trinidad and Tobago reported peritoneal dialysis. In Jamaica, male to female ratio was 1.5:1. The three commonest causes of end stage renal failure were hypertension (50.0%), diabetes mellitus (21.0%) and primary chronic glomerulonephritis (9.6%). The age range was 11–94 years (mean 47.7 years). Barbados had a male to female ratio of 1.8:1, age range of 19–81 years (mean age: 52.3 years). Hypertension (55.7%) and diabetes mellitus (27.0%) were the commonest causes. Trinidad and Tobago had a male to female ratio 1.3:1. The age range was 8–84 years (mean age 52.5 years). The four commonest causes of ESRD were diabetes mellitus (28.9%), hypertension (25.3%) and autosomal dominant polycystic kidney disease (3.9%) and chronic glomerulonephritis (3.9%). The British Virgin Islands, Tortola, had a male to female ratio 1.7:1.0. Age range was 26–86 years (mean, 57 years). Hypertension (67.9%) and diabetes mellitus (46.4%) were also the commonest causes. The Bahamas had a male to female ratio of 1:1.1 unlike the other countries. Hypertension (25.6%), diabetes mellitus (28.0%) and chronic glomerulonephritis (13.3%) were the commonest causes of ESRD. The Cayman Islands reported a male to female ratio of 1.2:1, with a mean age of 54.3 years. Hypertension (n = 27), diabetes mellitus (n = 12) and autosomal dominant polycystic kidney disease (n = 3) were the commonest causes of ESRD. Barbados and Jamaica had more than 50 per cent of its renal replacement therapy patients with serum albumin above the minimum of the normal range of 35–40 g/L. In regards to the calcium phosphate product, two-thirds of the patients in all countries reporting data had values below the recommendation of 4.4 mmol²/L². The percentage of patients achieving haemoglobin concentration above 10.0 g/dL was: 16.9% for Jamaica, 75.6% for The Cayman Islands, 35.9% for Barbados and 68.6% for Tobago. Erythropoietin usage was not reported. The URR was only available for Jamaica and the Bahamas and 80.6% and 60.9% respectively had URR above the accepted value of 65%. For all reporting countries the range of patients coded for hypertension but who also had diabetes mellitus was 2.2% to 17.1%. Only Bahamas reported on vascular access with 51.7% of patients having native arteriovenous fistulae.

Conclusion: Hypertension, diabetes mellitus and chronic glomerulonephritis were the commonest causes of ESRD across most of the English-speaking Caribbean countries. Peritoneal dialysis was only offered in some of the islands and kidney transplantation was rarely reported. More males than females were on long term renal replacement therapy in most of the islands.

Abstract WPO 31:

**ADHERENCE TO THERAPY: AN UNSUSPECTED CHALLENGE FOR NEPHROLOGIST
IN DEVELOPING COUNTRIES**

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Background: Poor adherence to medication regimens accounts for substantial morbidity, mortality, and increased health care costs in developing countries.

Objective: To assess adherence to therapy in non-dialysed patients with chronic kidney diseases and to identify the major barriers to adherence.

Patients and Method: We conducted prospective study during three months at the nephrology department of teaching hospital in Dakar-Senegal. Data were collected using a questionnaire. Rate of adherence (ROA) was defined as the percentage of the prescribed doses of the medication actually taken by the patient within a four weeks period. Statistical analysis was realised with SPSS 11.0.

Results: Mean ROA was 81 ± 12 % (46 - 100%) with a difference between male (75%) and female (84%). Three quarters of patients reported ROA more than 80%. Patients' adherence was inversely proportional to daily frequency of dose but not number of drugs. Blood pressure control and estimated glomerular filtration rate were not significantly correlated to adherence. Major obstacles to adherence were: complexity of drug regimen (OR = 3.33 [95% IC=2.50-4.32]; $p < 0.001$), auto-medication with plants (OR = 3.26 [95% IC=0.99-2.05]; $p = 0.005$), healthcare system inaccessibility (OR = 2.65 [95% IC=0.97-2.96]; $p = 0.002$), lack of information (OR = 2.35 [95% IC=1.22-3.57]; $p = 0.04$), side effects (OR = 1.654 [95% IC=1.05-1.96]; $p = 0.002$), high cost of medications (OR = 1.47 [95% IC=0.89-1.85]; $p = 0.004$) and forgetfulness (OR = 1.37 [95% IC=1.08-2.64]; $p = 0.004$).

Conclusion: Many obstacles contribute to poor adherence in patients with CKD. Most of barriers to adherence can be overcome by better communication between patients and health providers and accessibility of healthcare system.

Keywords: ADHERENCE TO THERAPY, CHRONIC KIDNEY DISEASES, SUB-SAHARAN AFRICA

Abstract WPO 32:

**PREVALENCNE OF ENURESIS AMONG PRIMARY SCHOOL CHILDREN IN SAGAMU
LOCAL GOVERNMENT AREA, OGUN STATE**

Adekanbi AF and Ogunlesi TA

Background: Enuresis is a common problem among children and adolescents.

Objective: To determine the prevalence of enuresis among school-aged children in Sagamu LGA

Method: Cross-sectional descriptive study of the age, sex and socio-economic status of primary school pupils with and without enuresis.

Result: Seven hundred and ten children aged between 5 and 18 years were interviewed. The mean age was 9.9 ± 2.7 years. There were 358 (50.4%) males and 352 (49.6%) females with a male-to-female ratio of

1:1. One hundred and thirty three (18.7%) subjects had nocturnal enuresis while the remaining 577 (81.3%) did not have enuresis. This gives a prevalence of enuresis of 18.7%. The mean age of the subjects with enuresis was significantly lower than the mean age of the subjects without enuresis [7.89 ± 1.97 years vs 10.45 ± 2.34 years; $t = 11.7$, $p = 0.000000$]. The prevalence was highest among subjects aged between 5 and 8 years and it decreased with increasing age. There were significantly more males in the enuretic group compared with the non-enuretic group [81 (60.9%) vs 277 (48.0%); $\chi^2 = 7.19$, $p = 0.007$]. Three hundred and fifty seven subjects (50.3%) had enuretic siblings. The proportion of enuretic subjects with enuretic siblings was not significantly different from the proportion of non-enuretic subjects with enuretic siblings [67 (50.4%) vs 290 (50.3%); $\chi^2 = 0.001$, $p = 0.981$]. Three hundred and fifty one (98.3%) subjects had a single enuretic sibling. All the subjects belonged to the socio-economic classes IV and V.

Conclusion: Enuresis is a common problem in children

Abstract WPO 33:

COMPARATIVE STUDY ON ENURESIS IN CHILDREN

Adekanmbi AF, Ogunlesi TA and Fetuga MB

Background: Enuresis is a common problem amongst children and is thought to be affected by age and socioeconomic status.

Objective: To compare the prevalence of enuresis amongst children in public primary school and private primary school.

Method: Cross-sectional descriptive study of the age, sex and socio-economic status of primary school pupils with and without enuresis in both public and private primary schools. The public schools are referred to as group A and the private school group B.

Result: A total of 1,054 pupils were interviewed; 710 (67.36%) were from the public schools and 344 (32.64%) from private schools. The age range was 5-13 years (mean \pm SD of 1.823yr) in Group B and 5-18 years (mean \pm SD of 2.487yr) in group A. The mean ages were 9.9 ± 2.5 years and 8.5 ± 1.8 years respectively though this was statistically significant $p = (0.000)$. There was no sex predilection in both groups (M:F = 1:1 and 0.9:1). The prevalence of enuresis in group A was 16.0% and 17.5% in group B. Males were more enuretic than females in the two groups. The mean ages of the enuretics in the two groups was statistically significant $p = 0.04$. All the pupils in group A were from the classes IV and V of the socioeconomic classification while only 34% (117) of the group B were from the classes IV and V. There were more enuretics in the class III of the group B (29/55 52.7%).

Conclusion: Enuresis is commoner in males and occurs more in the lower socio-economic strata.

Abstract WPO 34:

CONFLICT SITUATIONS IN HEALTH SERVICE WORKS: A STUDY OF HEALTH PROFESSIONALS IN A TEACHING HOSPITAL

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Background: Conflict being an integral part of human existence is a relatively common feature of all sectors of human endeavour, especially where individuals work together as teams. Much of contemporary

health care is delivered either directly or indirectly by several professionals working in teams. The study therefore assessed the occurrence, perception and attitude of health professionals to conflict in Obafemi Awolowo University Teaching Hospital Complex, (OAUTHC) Ile-Ife. It particularly examined conflict handling styles among the health professionals.

Methods: One hundred and fifty seven (157) health professionals selected by multistage sampling technique formed the sample. Data collection employed a structured questionnaire and an indepth interview schedule with selective probes. Data collection took two weeks and data analysis was done with aid of Statistical Package for Social Sciences (SPSS).

Results: Results showed that the frequency of occurrence of conflict among health professionals studied is rather rampant as evidenced by 14% who claimed to have been frequently involved in conflict situations and another 62% who submitted that they occasionally been involved. The study also revealed a generally satisfactory perception (88.7%) and a very satisfactory attitude of the health professionals to conflict. The study further established a significant relationship between discipline (occupation) and frequency of occurrence of conflict among the health professionals ($\chi^2 = 18.7$; $p = 0.04$). No significant relationship was however found between gender and occurrence of conflict among the health professionals ($\chi^2 = 3.26$; $p = 0.2$). Lastly, data established that health professionals employ a multiplicity of conflict handling styles when confronted with conflict situations at work.

Abstract WPO 35:

NEPHROLOGY NURSING EDUCATION IN NIGERIA: PROBLEMS AND CHALLENGES

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Nursing as a practice-based discipline is undergoing some reforms all over the world. Beyond the emergence of nursing science, innovative advances in health care demands that Nursing as a profession should prepare practitioners who would meet the challenges of care within the context of a complex milieu. While it may be true that Nursing has taken a giant leap from the days of intuitive care to highly sophisticated care, the training of nurses to fit purpose in the third world still face some challenges. The curriculum for General Nursing in Nigeria has little content of nephrology nursing. Yet nurses have incomparable roles to play in preventive, therapeutic and rehabilitative nephrology. This explains why it has become crucial for nurses to have appropriate understanding and competence in preventive, therapeutic and rehabilitative nephrology. Besides, competent nurses are needed to work in evolving sophisticated renal care team that brings specialists from other profession. Some of the daunting challenges facing Nephrology Nursing in Nigeria include: resistant to change; slow pace of scholarship in nursing; little or no academic recognition of nurses qualification; development of curricula that are congruent with the latest development in the world of Nephrology Nursing as well as educational system of the country; non uniform implementation of specialization in nursing with reckless abandonment of Nephrology Nursing. All these inform the need for developing programme that can to meet the challenges of the evolving reforms in nursing education as well as makes demand for innovation that will meet the needs of practicing nurses.

INFECTIONS AND THE KIDNEYS

Abstract WPO 36:

PYONEPHROSIS IN YAOUNDE GENERAL HOSPITAL: A REVIEW OF 21 ADULT CASES

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Background: Pyonephrosis is a preventable cause of nephron loss which is still common in emerging countries. Neglected urinary tract obstruction is the underlying cause of the condition. Morbidity remains extremely high and mortality from septicemia is not uncommon.

Aim : The aim of our study was to analyse the clinical features, underlying causes, treatment modalities and patient outcome in patients with pyonephrosis.

Patients and Methods: We carried out a retrospective and descriptive analysis of all adult patients seen with pyonephrosis over a six year period from 2000-2006 in the Yaounde General hospital. Patient characteristics, causes of obstruction, bacteriologic agents, treatment modalities, and outcome were noted. All cases of renal tuberculosis were excluded.

Results: A total of 21 patients were seen during the study period with a mean age of 42.75years. The sex ratio was 1:8 in favor of females. The frequent past medical history noted were urinary tract infection (72%), nephrolithiasis (16%), urologic surgery (12%) Automedication with antibiotics was found in 16% of cases. The main clinical features seen were fever (80%), lumbar pain (76%), cachexia (18%). Leucocytosis (75%) and anemia(54.17%) were the frequent. Urinalysis revealed pyuria in 72%, and urine cultures were positive in 47.6% of cases. Serum creatinine was within normal in all cases. Ureter-pelvic junction obstruction (56%), nephrolithiasis(28%), and tumors(16%) were the common causes of urinary tract obstruction. Treatment involved antibiotics plus the following surgical modalities: nephrectomy (64%), nephrostomy then nephrectomy(32%) nephrostomy only(4%). Culture of pus was positive in 71.43% of cases and Gram negative bacilli were responsible in all cases. Post operative complications encountered were subphrenic abscess 10%, empyema 5%, and peritonitis 5%. Mortality was 0%.

Conclusion: Pyonephrosis is a preventable cause of nephron loss. Early diagnosis and adequate treatment of both urinary tract infection and obstruction will be the cornerstone of prevention.

Keywords: PYONEPHROSIS, ETIOLOGY, TREATMENT

Abstract WPO 37:

RECURRENT URINARY TRACT INFECTION IN THE PAEDIATRIC AGE-GROUP IN WESLEY GUILD HOSPITAL, ILESA, OSUN-STATE

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Introduction: Situations arise that a child becomes asymptomatic after appropriate antibiotic treatment for urinary tract infection, remains asymptomatic for a variable period of time, and subsequently develops another culture-proven infection. Recurrent urinary tract infections in the Paediatric age group may be sequel to structural abnormalities, dysfunctional voiding (when a child doesn't urinate frequently or doesn't relax his muscles properly while urinating) or iatrogenic with prolonged use of urinary catheter. There is always the need to identify the cause which is subsequently treated.