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Review Article

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INTEGRATED MANAGEMENT: CHRONIC KIDNEY DISEASE, DIABETES MELLITUS, HYPERTENSION

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ABSTRACT

The increasing burden of chronic kidney disease and end stage kidney failure presents a challenge for both developed and emerging countries. While dialysis and transplantation consumes an ever-increasing proportion of the health budget in countries such as the United States, Japan and Taiwan, there is limited availability of these expensive therapies in the majority of emerging countries and more so in African nations.
Aims: To review the prevalence, causes and integrated strategies for treatment and prevention of end stage renal disease (ESRD) in Sub-Saharan Africa (SSA).

Materials and Methods: Review of literature and information received from colleagues in Africa.

Results: Approximately 70% of the least developed countries of the world are in SSA. Rapid urbanisation is occurring in many parts of the continent, contributing to overcrowding and poverty. While infections and parasitic diseases are still the leading cause of death in Africa, non-communicable diseases are coming to the forefront. There is a continuing "brain drain" of healthcare workers (physicians and nurses) from Africa to more affluent regions, resulting in large rural areas of Africa having no health professionals to serve these populations. There are no nephrologists in many parts of SSA; the numbers vary from 0.5 per million population (pmp) in Kenya to 0.6 pmp in Nigeria, 0.7 pmp in Sudan and 1.1 pmp in South Africa.

Chronic kidney disease (CKD) affects mainly young adults aged 20-50 years in SSA and is primarily due to hypertension and glomerular diseases. HIV-related chronic kidney disease is assuming increasing prominence and often presents late, with patients requiring dialysis. Diabetes mellitus affects 9.4-million people in Africa. The prevalence of diabetic nephropathy is estimated to be 6-16% in SSA. The current dialysis treatment rate is <20pmp (and nil in many countries of SSA), with in-centre haemodialysis the modality of renal replacement therapy (RRT) for the majority. Transplantation is carried out in a few SSA countries: South Africa, Sudan, Nigeria, Mauritius, Kenya, Ghana and Rwanda, with most of the transplants being living donor transplants, except in South Africa where the majority are from deceased donors. Prevention programmes are in their infancy in most of SSA, due to lack of personnel and resources.

Conclusion: Chronic kidney disease care is especially challenging in SSA, with large numbers of ESRD patients, inadequate facilities and funding, and lack of national or regional registries. Integrated management of CKD and its risk factors is necessary to impact on the burden of ESRD.

Key words: Sub-Saharan Africa – end stage renal disease – chronic kidney disease – renal replacement therapy.

Disclosure: There is no conflict of interest.

Chronic kidney disease (CKD) should be viewed as a continuum, ranging from risk factors causing CKD (diabetes

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HIV chronic kidney disease

HIV infection is epidemic in SSA. The number of new infections is now declining, with increasing numbers of patients on anti-retroviral therapy [17]. Data on the prevalence of HIV-related glomerular disease in Africa is scarce. This relates to the late presentation in Africa of patients with the disease; often patients are dialysis-requiring at presentation. Reported prevalence of CKD in HIV-infected ART-naïve patients in SSA ranges from 6-45% (Table 1) [18]. Screening studies in South Africa reported proteinuria in 5.5-6%, with HIV-associated nephropathy (HIVAN) on biopsy in 5-83%[19, 20]. Recent studies showed that the risk for HIVAN is linked to the MYH9 gene polymorphism, with the risk variant accounting for all or nearly all of the increased risk for FSGS (80%) and HIV-associated collapsing glomerulopathy (100%) that characterise African Americans [21, 22]. The APOL1 variant was reported to be strongly associated with the collapsing glomerulopathy of HIV-associated nephropathy in African Americans [23]. An escalating burden of HIV CKD may be anticipated, with increasing life expectancy on ART, ageing of HIV-infected populations and nephrotoxicity of the various drugs used in this population. Following ART, renal function improved[24], with renal survival dependent on virological response to therapy[25]. Lack of response was attributed to a high index of chronic damage in a study of 61 patients with HIVAN presenting with advanced CKD at the time of diagnosis and initiation of ART, 56% of whom reached ESRD in a median time of 4.2 years[26]. The response of both microalbuminuria (MA) and proteinuria to ART was rapid and sustained, resolving to normal limits within 3-6 months[27].

Diabetes mellitus

There are 135-million diabetics worldwide, with a projected increase to 300-million by 2025 and to increase by 170% in developing countries (± 40% in developed countries) [28]. Diabetes mellitus affects 9.4-million people in Africa. The estimated increase in diabetes mellitus in Africa is anticipated to be 12.7-million, an increase of 140%, by 2025. The prevalence of diabetic nephropathy is estimated to be 6-16% in SSA[29]. Forty percent of diabetics are at risk of overt nephropathy. Diabetic patients with renal disease have a five to six-fold increased mortality rate compared to diabetic patients with no signs of renal disease, or healthy subjects. Cardiovascular risk is increased in diabetics according to the level of proteinuria[30] and presence of hypertension.[32] Renoprotective strategies have been well-described and include glycaemic control, blood pressure control, anti-proteinuric drugs (rennin angiotensin system blockade and aldosterone antagonists), cessation of smoking, a diet low in salt and saturated fats, exercise and weight control and anti-platelet therapy (Table 2).

Resources for nephrology care

There is a continuing "brain drain" of healthcare workers (physicians and nurses) from Africa to more affluent regions[32], resulting in large rural areas of Africa having no health professionals to serve these populations. Table 3 shows the distribution of physicians and nephrologists in a spectrum of SSA countries and their corresponding rates of renal replacement therapy (RRT). There are no nephrologists in many parts of SSA; the numbers vary from 0.5 pmp in Kenya to 0.6 per million population (pmp) in Nigeria, 0.7 pmp in Sudan, 1.1 pmp in South Africa[33]. The United States had 16.7 nephrologists pmp and optimal numbers are 30 nephrologists pmp.

Renal replacement therapy

The availability of RRT is limited in much of Sub-Saharan Africa due to high costs and a shortage of skilled personnel, and is responsible for the high rates of morbidity and mortality. Most dialysis centres are situated in cities, placing a further burden on patients who often have to travel long distances to get treatment. In-centre haemodialysis is the modality of RRT for the majority of African countries. Many patients are under-dialysed; only 20% of patients in a Nigerian centre could afford to have dialysis three times a week, and 70% could only afford it once a week[3]. As the majority are self-funded, very few are able to sustain chronic dialysis beyond six months.

Renal replacement therapy was accessed by approximately 1.8-million people worldwide in 2004; less than 5% of the dialysis population was from SSA. The current dialysis treatment rate ranges from <20 per million population (pmp) for most of SSA (and nil in many countries of SSA) to 421 pmp in Egypt; the corresponding figures for Japan being 1,940 pmp, USA 1,090 pmp and Germany 800 pmp. Dialysis rates were 45 pmp for haemodialysis (HD) and 23 pmp for CAPD in South Africa; 46 pmp for HD and 3 pmp for CAPD in Sudan and 7.5 pmp for HD and 1.2 pmp for CAPD in Kenya compared to 421 pmp for HD and 0.3 pmp for CAPD in Egypt, 650 pmp for HD and 20 pmp for CAPD in Tunisia[33]. Availability of CAPD is limited in Sub-Saharan Africa because of the high cost of dialysis fluids and a perception of a high rate of peritonitis. The average cost of haemodialysis in Africa is $100 per session. The annual costs of CAPD are equivalent to that of in-centre haemodialysis.
Transplantation is carried out in a few SSA countries: South Africa, Sudan, Nigeria, Mauritius, Kenya and Ghana, with most of the transplants being living donor transplants, except in South Africa where deceased donor transplants are carried out to a greater extent (80% deceased donors and 20% living donors respectively). Deceased donation is hampered in many countries by a lack of a legal framework governing brain death, and religious and social constraints. The transplant rate in Africa averages 4 pmp and is 9.2 pmp in South Africa[35].

Funding for RRT is primarily private in much of Africa, with the governments of only a few countries providing RRT for small number of patients (e.g. Cameroon, Mali, Mauritius, Rwanda, Sudan, South Africa); indigent South Africans are able to access chronic dialysis at governmental cost only if they are eligible for transplantation. In many African

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Table 3. Distribution of Physicians, Nephrologists and Renal Replacement Therapy in Some Sub-Saharan African Countries

Country	Physicians No Density/10^4		Neph No PMP	RRT HD CAPD TP No PMP No PMP No/year		
Nigeria	34923	3	70 0.6	1000 8	0	70
Ghana	3240	2	2 0.1	35 2	0	0
Senegal	594	<1	2 0.2	50 4.2	26 1	0
Sudan	11083	3	25 0.7	1610 46	111 3	74
Kenya	4506	1	15 0.5	260 7.5	30 1.2	10
Rwanda	432	<1	1	0	30 3.7	18
South Africa	34829	8	50 1.1	2070 45	1058 23	240

Abbreviations: No = number; Neph = nephrologists; RRT = renal replacement therapy; HD = haemodialysis; CAPD = continuous ambulatory peritoneal dialysis; TP = transplants; PMP = per million population

Table 4. Screening for Chronic Kidney Disease

- High risk
  - Hypertension
  - Diabetes Mellitus
  - HIV
  - Family history of chronic kidney disease
  - Older age group
- Screening tests
  - Urine: protein creatinine ratio; haematuria
  - Serum creatinine→ eGFR

Original Article

AJN

DIVERSITY IN HLA CLASS I AND CLASS II IN KIDNEY DONORS AND RECIPIENTS ACCORDING TO RACE IN KWAZULU-NATAL (SOUTH AFRICA) – IMPLICATIONS FOR TRANSPLANTATION

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ABSTRACT

HLA matching of donors and recipients plays a major role in the success of organ transplantation. Race differences in HLA have been reported elsewhere.

Aim: To analyse the diversity of HLA Class I and Class II among kidney donors and recipients according to race.

Methods: This is a retrospective study of HLA types of renal patients and kidney donors attending the Renal Unit at Addington and Inkosi Albert Luthuli Central Hospitals from 1985 to 2002. Class I HLA typing was done using serological methods while Class II HLA typing was done using serological or molecular methods at the Tissue Immunology Laboratory, South African National Blood Services, Durban, South Africa. Files for 470 individuals were reviewed. There were 143 Blacks, 169 Indians, 88 Whites and 70 Coloureds. All the files were included and analysed according to race.

Results: HLA A locus, 18 distinct antigens were recorded in Black patients. In Indians, 17 antigens were recorded. In Whites, 16 antigens were observed and the most frequent were A2 (29%) and A1 (17%). For the HLA B locus, 29 antigens were recorded in Blacks with the two most frequent being B58 (13%) and B44 (12.5%). In Indians, 28 antigens were recorded. For DR locus 29 distinct antigens were recorded.

Conclusion: Race differences in the profile of HLA types are observed. This may render difficult HLA matching between donors and recipients in organ transplantation.

INTRODUCTION:

Major Histocompatibility Complex (MHC) Class I and Class II matching of donors and recipients plays an important role in the success of organ transplantation [1,2]. HLA diversity has been reported with the most diversity amongst Blacks [3-5]. High levels of diversity was found in Blacks living in Africa (The Gambia, South Africa, Malawi) and in Blacks in the diaspora such as from Martinique in the Caribbean and African Americans in the USA [3,6,7]. In a previous report from Durban, differences in the prevalence of certain HLA antigens between children with nephrotic syndrome have been observed in Black Africans and Indians [8].

The association of HLA and diseases are widely reported [9-12]. Certain HLA antigens have been associated with renal disease and cardiovascular diseases, especially certain phenotypes are associated with cardiovascular hypertrophy [13,14]. Other associations include, for instance, HLA A3 which is associated with low prevalence of atheromatosus in subjects with type2 diabetes mellitus [15]. In this study, we analyse head to head HLA diversity between race groups (Black Africans, Whites, Indians and Coloureds(individuals of mixed ancestry)) in the same region.

The aim of this study is to analyse the diversity of HLA Class I and II in kidney donors and recipients according to race and to discuss implications on kidney transplantation

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a similarity between our results and the general population. Race differences in the profile of HLA types are observed. Although kidney donation can be done across racial lines, the contribution of kidneys from various race groups is variable. We must encourage all race groups to contribute to the kidney donor pool to improve HLA matching [1,2]. Furthermore, kidney donation is based only on major histocompatibility complex. There may be significant difference in minor histocompatibility genes that are not accounted for. Diversity in genes involved in the processing of peptides presented by MHC Class I proteasome genes and genes for peptide transport associated proteins (TAP) have been reported [24,25]. This may render difficult HLA matching between donors and recipients in organ transplantation in South Africa.

Several reports have indicated differences in racial groups. Wadee & Du Toit revealed there were HLA differences within the Indian population (hindus, muslims, tamils) living in Johannesburg (South Africa) [26]. A linkage disequilibrium was found in Aw33, B44, B35, Cw4, B7, and Cw7 antigens. Antigen Aw34 was absent in these populations. The same was found in the Indian population in this study. Modiba et al., reported difficulty in having a good match amongst the South African Black population resulting in a less favourable outcome [27]. Du Toit et al in a report on MHC Class I revealed variation in Black African, Coloured and Caucasians [5]. Martell et al reported the HLA Class II alleles DRw8 and DRw14 were only observed in a mixed ancestral South African population [28].

The Coloured population in South Africa is formed of population of mixed origin and the San people [24]. One would expect to have the diverse alleles found in other race groups plus alleles present in the San people. Similar observations were reported in Latin America highlighting the complexity of HLA profile in a population of mixed origin [29]. This may render difficult HLA matching between donors and recipients in organ transplantation.

In our transplant programme, living related transplantation is the most practised (2/3). As we are striving to increase the percentage of cadaver transplant, it is important that the increase of cadaver donors occur for all the race groups to maintain or improve HLA matching between donors and recipients. Currently most cadaver donors are from White communities. White cadaver donors represent 2/3 while the most recipients of cadaver donors are from the Black population. Barriers to transplantation amongst Blacks and Indians needto be identified and addressed to increase the number of transplants and improve the outcome. Otherwise, the increase in the number of cadaver transplants in Black and Indians would occur at the expense of HLA matching, therefore compromising the outcome.

Table 1: Frequency of a selection of HLA alleles according to race

HLA type	Blacks (%)	Whites (%)	Indians (%)	Coloureds (%)	
A2	16	29	20	22	
A24	3.5	7.5	17.5	11	
A30	19	2.9	1.1	7	($p<0.0001$)
B7	8	17	8.8	12	
B35	5	6.8	16.4	8.8	
B58	13	2.8	1.7	6	
DR2	3	6	12.6	6.4	($p<0.001$
DR4	6	12.9	11.7	12.8	
DR11	17	6.2	4.4	7.2	

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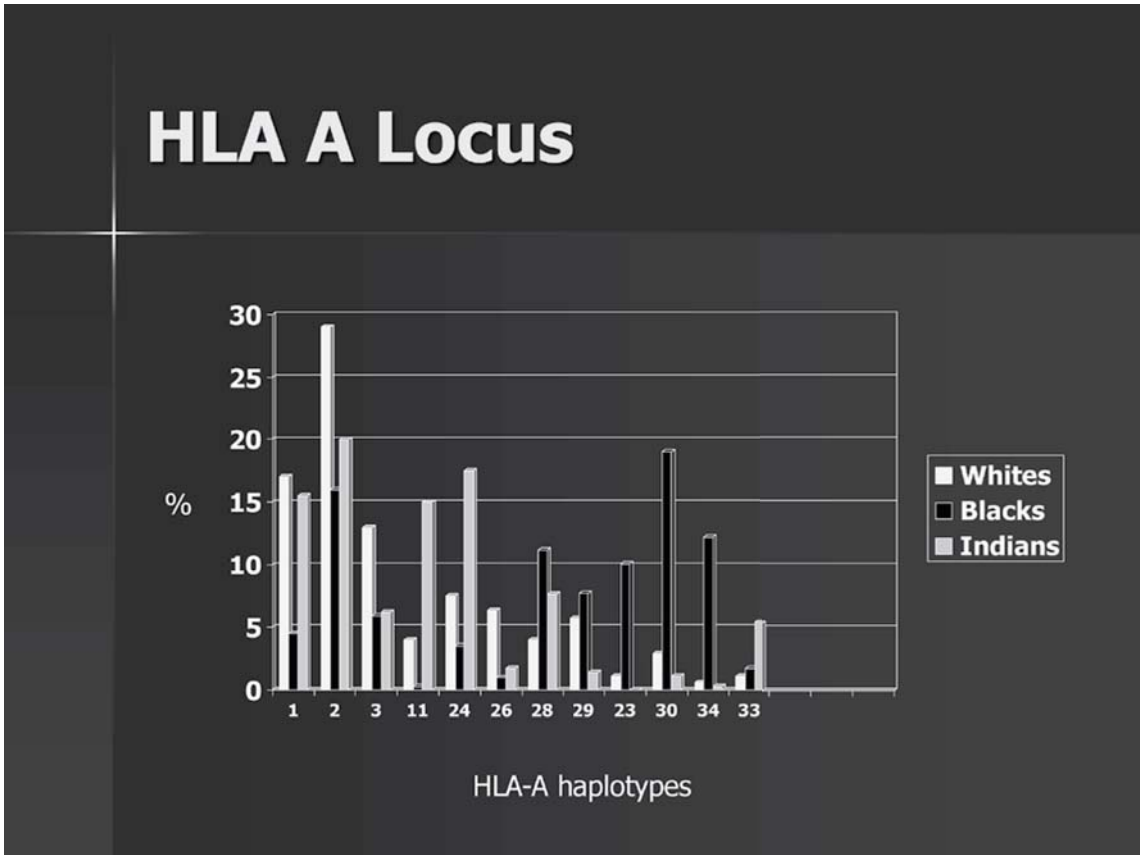

Figure 1 Frequencies of HLA-A haplotypes according to race

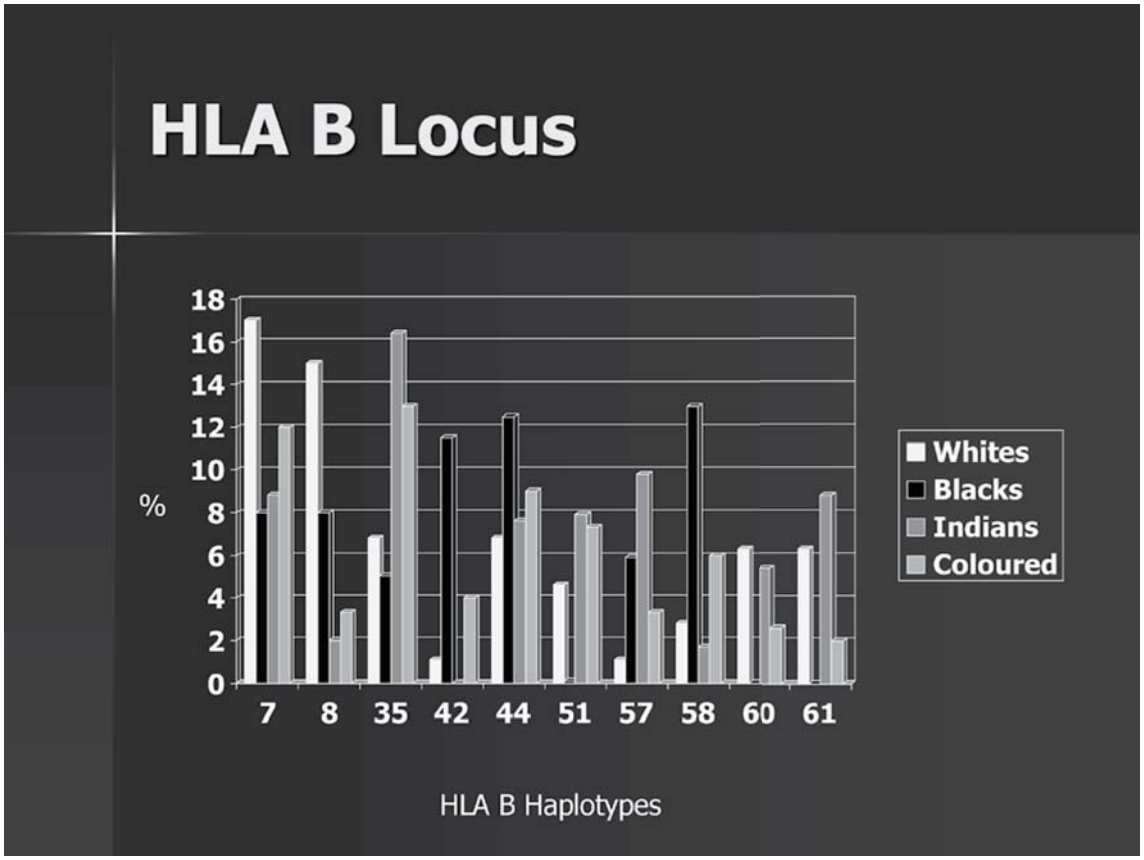

Figure 2 Frequencies of HLA-B haplotypes according to race

0006

A SINGLE BASEPAIR MUTATION CAUSES CYSTINOSIS IN THE MAJORITY OF WESTERN CAPE PATIENTS.

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Background: Cystinosis is caused by mutations in the CTNS gene. While many mutations have been diagnosed in other race groups, local mutations are unknown. The local phenotype has also not been described.

Method: In the last 5 years 17 patients with suspected cystinosis were referred for molecular analysis of the CTNS gene. A retrospective chart review was conducted on 14 of these patients where the clinical information was available. Molecular analysis was done in all 17 patients and six parents.

Results: Race : African Black (8) and Cape Coloured (9)]). Mean age at presentation:

2 years and 5 months (range: 5 months-5 years). All patients presented with a history of vomiting and polyuria and had developed Fanconi's syndrome .Six patients have developed Chronic Kidney disease (two end stage). 1 patient has hypothyroidism. 13 patients had corneal cysteine crystals. All patients had raised white cell cysteine at diagnosis. A molecular diagnosis of cystinosis was made in all 16/17 patients . 13 patients were positive for a homozygous G>A mutation in intron 11 (c.971-12G>A). Another was homozygous for S141F. Two were compound heterozygotes for c.971-12G>A and either c.16 del ctga or S141F.

Conclusion: Most patients in the Western Cape present with a severe infantile cystinosis phenotype. Most mixed race and black patients have G>A mutation in intron 11 (c.971-12G>A) It is not a mutation reported in Caucasian patients. This will aid in the diagnosis of patients with Cystinosis in South Africa as well as ante-natal testing for families

0007

AUTOMATED PEDIATRIC PERITONEAL DIALYSIS IN AFRICA: EXPERIENCE OF THE UNIT OF PEDIATRIC NEPHROLOGY OF THE TEACHING HOSPITAL OF YOPOUGON (ABIDJAN IVORY COAST)

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Automated Peritoneal Dialysis (APD) is a modality for acute renal failure (ARF) in pediatrics, rarely practiced in black African hospital. APD began in January 2009. Before, children with ARF had no possibility of extrarenal purification apart from symptomatic treatment. We report the first results of the APD in this unit.

Methodology: From January to December 2009, we retrospectively studied 31 cases of ARF. The indication of the APD was made in 15 children among whom 10 were effectively dialysed.

Results.: The sex ratio was 0.42 (3/7) with an average age of 9.7 years (2-19 years). Glomerular diseases (60%), malaria (20%), acute respiratory infection, post-operative ARF and infectious comment ARF (2 cases / 10) were the principals etiologies. The time sold between the indication of ADP and the care of the patient was of maximum 12 pm in 70% of the children. The mean duration of hospitalization was 14.3 days (7-28 days). Complications were dominated by peritonitis (3/10), secondary migration of the catheter (1/10), the leak of the liquid of dialysis (3/10) and a defect of drainage (2/10).

2 children recovered renal function, 5 have evolved into chronic renal failure, there was 30% of deaths.

Conclusion.: The ADP could be a means to reduce the mortality of the ARF of the young child to Africa. But in view of our experience it should come along with a better training of the teams of pediatric surgeons in the installation of catheter and a bigger raising awareness to the measures of asepsis.

0008

ACTIVITIES REPORT OF AN AFRICAN UNIT OF PEDIATRIC NEPHROLOGY AFTER THREE YEARS OF EXERCISE

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Introduction: pediatric nephrology is the discipline that supports kidney of child. The care of these specific renal diseases motivated the creation of a unit in the pediatric department of the teaching hospital of yopougon since 2009. After three years of operation we present the result concerning consultations and hospitalization in the unit.

Methodology: It was a retrospective study from january 2009 to December 2011. All the children who were received in the consultation or in hospitalization were included.

Results: After the first year, we recorded 666 consultations among which 184 patients and 50 hospitalizations. During the second year, 740 consultations were recorded and 60 hospitalizations. Concerning the third year, 554 consultations and 42 hospitalisations. The main concerned age bracket was the children from 5 to 10 years old in the consultation and the sex-ratio was 1,53. The main diseases were nephrotic syndrome (33%), congenital urinary tract

Results: Thirty eight patients were recruited, 19 male, mean age 7.9 years. One tested HIV positive, 17 were non-reactive and 19 were HIV unknown. The median creatinine at presentation was 1 mg/dL (range 0.1-33 mg/dL). Twenty (53%) patients presented with glomerular disease; 11 with nephritic syndrome, 9 with nephrotic syndrome (all steroid sensitive). Six (16%) patients were admitted with non-glomerular acute kidney injury; 4 died during admission. Four (10%) patients had urological disease with impaired kidney function; two (5%) had chronic kidney disease and six (16%) had uncertain diagnoses.
Conclusion: Glomerular diseases predominate in this study although the histological subtype is unclear. The mortality from acute kidney injury in children is high. Improving patient outcomes by developing diagnostic services including renal histopathology and early intervention for acute kidney injury are priorities for the paediatric renal service.

0021

AN AGE-SEX REGISTER OF NEW PATIENTS WITH ADVANCED KIDNEY FAILURE PRESENTING TO KOMFO ANOKYE TEACHING HOSPITAL [KATH], KUMASI: RESULTS AFTER 6 MONTHS' EXPERIENCE.

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Introduction: There are few data on the incidence and prevalence of kidney failure in Africa, and few Age-sex registers or Renal registries. In many countries such registries have become a vital component in planning renal services. Our study was undertaken in an attempt to ascertain the numbers of new patients presenting with serum creatinine ≥300 μmol/l, and to assess the severity of renal dysfunction. Collection of such information more widely could assist public health planners, and ultimately improve the prospects for patients with kidney disease.
Method: Starting on May 1st 2012, data, including age, gender, serum creatinine and district of residence, were collected on new patients presenting to KATH with a serum creatinine of ≥300 μmol/L. Patients were identified both in the Emergency department and in the Renal/Hypertension clinic.
Results: During this first 6 months 142 individuals [M 79, F 63] were identified. Their mean age was 47.2±18.9 [males: 47.0±19.2, females: 47.3±18.8. 52.8% of patients lived in the Kumasi metropolitan area. Serum creatinine: range 301–5,091 μmol/L, mean 1246.0 ± 847.2 μmol/L; 72 of the 142 had a creatinine of >1000 μmol/L. The majority of patients [88.7%] had Stage 5
Chronic kidney disease.
Conclusion: Newly presenting advanced kidney failure is common at KATH, there being 25–30 such patients a month. Our data show too that the patients present very late in the course of their disease.

0022

BIOPSY-EVALUATED NEPHROTIC SYNDROME AMONG CHILDREN DIAGNOSED IN KANO: A CLINICO-PATHOLOGICAL STUDY.

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Objective: To evaluate clinico-pathological features of children with nephrotic syndrome seen in a developing paediatric nephrology unit in northern Nigeria.
Method: All children less than 15 years of age who presented with nephrotic syndrome and underwent renal biopsy at Aminu Kano Teaching Hospital (AKTH), Kano, between November 2011 and November 2012 were included in the study. Their microscopic diagnoses were evaluated alongside clinical and other laboratory parameters.
Results: Twenty nephrotic children were studied, 17 males and 3 females. Peak age was 7 - 8 years (range 2.5 - 13 years). These represent 55% of total paediatric nephrotics in the recently established unit, the rest of which have never had renal biopsies. The indications for renal biopsy were steroid-resistant nephrotic syndrome in 11 (55%) children, nephrotic syndrome pre- steroid treatment in 6 (30%) children and frequently-relapsing nephrotic syndrome in 3 (15%) children. Hypertension was found in 7 (35%) children. Sixteen children (80%) had microscopic haematuria on presentation. The most common histopathological diagnosis was focal glomerulosclerosis in 9 (45%) children (segmental = 8; global = 1). Minimal change disease was found in 4 children (20%), membranoproliferative glomerulonephritis in 3 children (15%), membranous nephropathy in 3 children (15%) and diffuse mesangial hypercellularity in 1 child (5%). Of the six children who had renal biopsy before treatment, 3 (50%) were found to have focal glomerulosclerosis.
Conclusion: Focal segmental glomerulosclerosis was the most common histological subtype diagnosed in Kano among children with nephrotic syndrome.

0023

EPIDEMIOLOGY AND CLINICOPATHOLOGIC OUTCOME OF CHILDHOOD AND ADOLESCENTS' CHRONICKIDNEY DISEASE

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Introduction: Due to dearth of data, understanding of chronic kidney disease (CKD) aetiology, manifestations and management has been poor and outcome dismal in African children.
Method: A retrospective analysis of hospital data of 154 CKD children and adolescents was conducted to determine the epidemiology and clinicopathologic outcome of paediatric CKD.
Results: Overall mean incidence was 11 (6-20) per million children population (pmcp)/year while prevalence averaged 48 (8-101) pmcp. There were 86 males (55.8%). Median age was 10.0 (0.2-15.5) years with 83.8% ≥ 5 years old. Aetiologies were glomerular disease (GMD, 90.26%), congenital and acquired urinary tract (7.79%) and hereditary

Data	GROUP 1		GROUP 2	
HAART	Pre-R x	2yrs post-R x	Baseline 2yrs	4yrs
Number	87	32	82	28
Mean age (years)	38		41	
Gender (F) %	48		42	
CD4	145	341	303	430
HIVAN	9	5	7	2
HIVICD	8	7	3	1
eGFR	20.8	57.3*	38.9	47.3
Proteinuria (g/day)	3	0.8*	3	2.1
Hypertension	35		34	
Diabetes mellitus	11		11	
Tuberculosis	28		25	
HIV-related malignancy	5		2	
ESRD	32	8	18	14

*p<0.05 (Kruskal-Wallis test) Group 1: Baseline eGFR increased from 20.8ml/min to 57.7ml/min (p<0.05) after 24 months. Baseline proteinuria dectreased from 3g/day to 0.8g/day at 24 months (p<0.05). There were no significant changes in Group 2. HIVAN (N=16) and HIVICD(N=11) both improved with HAART. Factors associated with poor renal outcome were diabetes mellitus (OR 4.9, CI: 1.2 - 18.9, p=0.02) and lower starting eGFR (OR 1.01, CI: 1-1.03, p 0.01).

Conclusion: Initiating HAART before severe renal dysfunction has developed improves renal outcomes and reduces the burden of HIV-CKD in resource-limited settings.

0027

PROGRESSION OF CHRONIC KIDNEY DISEASE

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Aim: To assess progression of CKD in a cohort of patients attending a renal clinic.

Method: The progression of CKD was studied in 122 patients with CKD of diverse aetiology in a retrospective study (observation time 3 years).

Results: There were 122 participants. Males comprised (50.8%) of the participants. Blacks accounted for 55.7 % (n=68). The median age was 54.1±13.4. Diabetes mellitus and hypertension were the commonest causes of CKD. GFR decreased from 37.9 to 33.7 (p<0.001). MAP decreased from 131.4±21.1 to 121.4±14.5 mmHg (p<0.001). Eight percent of the participants had doubling of the serum creatinine. Seventy two percent were on RAAS blockers. Serum creatinine positively correlated with SBP (r=0.235; p=0.009), DBP (r=0.318; p<0.0001) and MAP (r=0.312; p<0.0001); and negatively correlated with bicarbonate (r=-0.543; p<0.0001), haemoglobin (r=-0.464; p<0.0001) and albumin (r=-0.386; p<0.0001). Sixty three percent achieved target blood pressure control. On further subjecting the data to multiple regression analysis, SBP (p=0.04), bicarbonate (p=0.03) and haemoglobin (0.04) remained significant.

Conclusion: Few of the study participants had worsening of the renal function. BP improved at the end of follow-up. Systolic BP, acidosis and anaemia were independent risk factors for progression of CKD.

0028

CLINICOPATHOLOGICAL CORRELATION OF RENAL DISEASE IN HIV INFECTION

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Renal disease in HIV infection was 1st described by Rao et al in 1984 and for the first two decades of the HIV pandemic, HIVAN was synonymous with HIV renal disease. Since then the spectrum of HIV renal disease has widened. 216 HIV-infected patients underwent a renal biopsy, between January 2003 and November 2012, for standard indications at our institution. Retrospective review of indication to biopsy; demographic data (race, gender, age); clinical parameters (CD_4, HIV viral load, eGFR, cholesterol, albumin, proteinuria) and histopathological pattern was performed. 159 patients were included. A comparison between different histopathological patterns with respect to indication to biopsy and clinical data was conducted.

Of the 159 patients, 151 were of Black African ethnic origin, 81 were male and 78 were female. Mean age was 35.64±9.44 years. Leading biopsy diagnoses were HIVAN (21.9%), FSGS (16.9%) and HIVICK (14.4%). ANOVA of parameters by histology revealed eGFR to be statistically significant between groups. Histology was assessed by indication to biopsy. Nephrotic syndrome was the commonest biopsy indication. Comparing the HIVAN and HIVICK groups, eGFR was lower and proteinuria higher in the HIVAN group. Patients with non HIV-related renal disease on biopsy were older, had lower serum cholesterol and worse eGFR.

With the use of HAART survival of HIV-infected individuals has improved, resulting in the occurrence of HIV-related and non HIV-related kidney disease in infected persons. Due to overlapping clinical presentations and difficulty in predicting histological pattern, renal biopsy remains critical to patient care.

0030

A 2 YEAR RETROSPECTIVE REVIEW OF OUTCOMES OF ACUTE PERITONEAL DIALYSIS IN KING EDWARD HOSPITAL, DURBAN, SOUTH AFRICA.

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Background: Acute peritoneal dialysis (PD) is a renal replacement treatment modality that is still relevant today in many low resource centres due to its relative ease of

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Background:
Kidney disease is a common cause of morbidity and mortality in Sickle Cell Disease patients with up to 5% of them developing end stage renal disease. Whereas as high as 38% of SCD patients have covert nephropathy which could be retarded by drugs. We set out to assess the usefulness or otherwise of Angiotensin Receptor Blocker (Telmisatan) Therapy in SCD patients with microalbuminuria, overt proteinuria and/or reduction in GFR.
Methodology: Forty SCD patients were given Telmisartan (40 - 80 mg) daily and biochemical parameters were assessed at 6 weeks and after 12 weeks. They were then repeated after 6 months of stopping Telmisartan therapy.
Results: Thirty nine (97.5%) completed the study with age range of 18-56 years with a median of 27 years. The mean arterial blood pressure was 79.5±, 97.5 and 98.0 mmHg at 0, 6 and 12 weeks respectively ($p<0.0001$). The median microalbuminuria level for 27 patients with microalbuminuria regressed from 15 to 10 and 5.0 mg/g at 0, 6 and 12 weeks respectively ($p<0.0001$) while the mean 24-hour urinary protein level for 12 patients with overt proteinuria was 1.03± 0.49, 0.57±0.16 and 0.45±0.10 g/day at 0, 6 and 12 weeks respectively ($p<0.0001$). The median glomerular filtration rate (GFR) for 38 patients progressively increased from 54.75 to 70.25 and 72.5 mls/ min/1.73m2 Body Surface Area at 0, 6 and 12 weeks respectively ($p<0.0001$).
Conclusion: Telmisartan therapy led to a reduction in proteinuria and microalbuminuria and also improve glomerular filtration rate (GFR) in SCD patients.

0048

COMPLICATIONS ASSOCIATED WITH HAEMODIALYSIS OF CHILDREN DIALYZED AT AHMADU BELLO UNIVERSITY TEACHING HOSPITAL ZARIA

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Background: Haemodialysis is the commonest form of renal replacement therapy used in Nigerian adults but is much less often used in children. Not much is known about complications associated with paediatric haemodialysis in Nigeria. The aim of this study was to review complications associated with haemodialysis in paediatric patients at Ahmadu Bello University Teaching Hospital, (ABUTH) Zaria, Nigeria.
Method: Retrospective audit of dialysis records and case notes of children dialyzed at ABUTH.
Results: Seventeen children (3 to 15 years) had a total of 61 haemodialysis sessions (range 1-9 sessions per child) over a four year period. Indications for dialysis were severe Acute kidney Injury (AKI) 9(52.9%), Chronic kidney disease 3(17.6%), and acute on chronic renal failure in 5(29.4%) cases. Most patients presented to hospital late and were severely ill – 9(52.9%) had multiorgan dysfunction. Complications occurred in 6(35.3%) children during 38(62.3%) of the dialysis sessions and included problems with blood pressure (hypotension/hypertension) in 15(24.6%) sessions, seizures in 11(18%) and difficulties with access and blood flow in 11(18%) sessions. Complications varied from mild and transient to severe. They led to discontinuation of 13(21.3%) dialysis sessions. One 1(2.7%) patient died. Complications which occurred in the other sessions were successfully managed but improvement in renal function was dependent on length of dialysis.
Conclusion: Complications occurred commonly during paediatric haemodialysis and affected the duration and efficiency of the procedure. Continued research is needed to prevent, anticipate, and manage these complications. Preventive measures must include encouraging patients to present earlier to hospitals.

0050

ANEMIA IN PATIENTS ON CHRONIC HEMODIALYSIS: PREVALENCE, CHARACTERISTICS AND MANAGEMENT IN A LOW RESOURCES SETTING.

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Aim: We investigated the prevalence, characteristics and management of anemia in patients on chronic hemodialysis and assess the response to blood transfusion based management in Cameroon.
Method: This was a cohort study of five months duration (August-December 2008) conducted at the Yaounde General Hospital hemodialysis center, involving 95 patients (67 men, 70.5%) on chronic hemodialysis by a native arterio- venous fistula. A monthly evaluation included full blood count, number of pints of packed cell and vital status.
Results: At baseline, 75 (79%) patients had anemia which was microcytic and hypochromic in 32 (43%) patients. Anemia was corrected in 67 (70.5%) patients using blood transfusion only while 28 (29.5%) patients were receiving erythropoietin (11 regularly, 39%). Only 77.2% of 342 pints (range 0-7 per patients, median 3.8) of packed cell prescribed were effectively received by patients during the follow-up at an unacceptably high cost to patients and families. Mean hemoglobin and mean corpuscular hemoglobin levels remained within the same range during follow-up, while mean globular volume increased. Being on erythropoietin was the main determinant of favorable trajectories of hematological markers. In all, 18 patients died during follow-up, with neither anemia, nor baseline hematological parameters being associated with mortality risk.
Conclusion: Patients on chronic hemodialysis in this setting have a high prevalence of predominantly microcytic hypochromic anemia, with limited capacity for correction using blood transfusion only. Strategies to reduce the burden of anemia should include improved access other means for correcting anemia in dialysis and the creation of a national blood bank.

on dialysis. CD4 counts and viral load at dialysis initiation did not impact on survival in our group. Dialysis modality did not impact on mortality.

0056

CHRONIC KIDNEY DISEASE IN GHANA

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Background: The prevalence of chronic kidney disease is increasing rapidly in Africa and other parts of the world. Previous data from Korle-Bu Teaching Hospital in Ghana, show that 15% of all medical admissions have kidney disease. In addition 10% of all deaths on the medical ward are due to chronic kidney disease. Most patients with chronic kidney disease in Ghana are aged between 20 and 50 years. There are few recent data on the causes for chronic Kidney Disease (CKD) from Africa. Previous studies reported that glomerulonephritis and hypertension were the major causes of CKD in Africa. We reviewed data on 100 new admissions with CKD in 2012. The information extracted from patients' records included; demographic factors, renal diagnosis, cause of renal failure, presenting serum creatinine, and sonographic measurements of kidney sizes.

Results: 82% of the patients with CKD were aged between 20 to 69 years with a slight male preponderance (male to female ratio of 1.1:1). The commonest cause of CKD was Hypertension (33%) followed by chronic glomerulonephritis (28%). Diabetes alone was a cause in 11% of patients. 12% of the patients had both hypertension and diabetes. Kidney sizes: Right- between 9 t0 10.9cm for 62.5% of the patients and less than 8.0 cm in 25% of patients. Left- between 8 to 10.9cm in 67.3% of the patients and less than 8cm in 20.8% of patients.

Conclusion: Most of the patients with CKD were young and the commonest causes of CKD were hypertension and glomerulonephritis.

0060

PERITONEAL DIALYSIS IN ESRD TREATMENT, PILOT EXPERIENCE IN WEST AFRICA

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Introduction: Peritoneal Dialysis (PD) is rarely used in the western sub-Saharan Africa to treat patients with end-stage renal disease (ESRD). The present study is a retrospective review of the initial 6 years experience with PD in Senegal for ESRD therapy.

Materials & Method: Single centre retrospective cohort study of patients treated with PD between March 2004 to December 2010. Basic demographic data was collected on all patients. Peritonitis rates, causes of death and reasons for transfer to HD were determined in all patients.

Results: Sixty two patients were included in the study. The median age was 47 ± 13 years with a male/female ratio of 1.21. Nephrosclerosis and diabetic nephropathy were the main causes of ESRD. Forty five peritonitis episodes were diagnosed in 36 patients (58%) for a peritonitis rate of 1 episode/20 patient months. Staphylococcus aureus and Pseudomonas aeruginosa were the most commonly identified organisms. Touch contamination has been implicated in 26 cases (57.7%). In 23 episodes (51%), bacteria cultures were negative. Catheter removal was necessary in 12 cases (26.6%) secondary to mechanical dysfunction, fungal or refractory infection. Sixteen patients
died during the study.

Conclusion: Peritoneal dialysis is suitable therapy which may widely use for ESRD treatment in western sub-Saharan Africa. A good peritonitis rate can be achieved despite the difficult living conditions of patients. Challenges to the development of PD programs include training health care providers, developing an infrastructure to support the program, and developing a cost structure which permits expansion of PD program.

0064

CONTRIBUTION TO THE STUDY OF POSTPARTUM ACUTE RENAL FAILURE (CONNECTION OF 146 CASES COLLECTED IN DAKAR)

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Aim: The aim of this study was to determine epidemiological, clinical, biological, etiological and therapeutic profiles of ARF - pp, and to assess the materno- fetal prognosis.

Method: This is a retrospective study in the Department of Nephrology at Aristide Le Dantec Hospital in Dakar over a period of 10 years (2000-2009). Patients with pre-existed impaired renal function before pregnancy were not included. 146 patients with ARF – PP were surveyed. Prognosis factors were determined by comparing two groups of patients according to the favourable or unfavourable renal function development.

Results: The hospital prevalence was 4.65%. The average age was 31,01±6,63 years. The perinatal mortality was 87.7%. The oligo-anuria was found in 82.2% of cases. The average blood creatinine and urea were 1.5 g/l and 96,08 mg/l, respectively. The acute tubular necrosis was found in 145 cases. This was always due to a childbirth bleeding result of a retro-placental Hematoma in 60,27% of cases. Hemolytic uremic syndrome was found in one case. The hemodialysis treatment was used in 57.5% of the cases. The recovery of renal function was complete in 45.9% of cases. Poor prognosis factors were: The time limit of taking care, the rural origin of the patient, the hemorrhagic or septic abortion, oliguria, serious renal impairment, the non-use of hemodialysis treatment.

Conclusion: The Africa and specially the Senegal should be implemented all our resources to combat the ARF-PP .The most efficient tool of prevention is still a rigorous follow-up of pregnancies.

0074

SEROCONVERSION TO HEPATITIS B AND C POSITIVITY AMONG PATIENTS ON MAINTENANCE HAEMODIALYSIS IN CAMEROON: A SINGLE CENTRE STUDY.

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Background: Maintenance haemodialysis constitutes a high risk environment for both Viral Hepatitis B (HBV) and hepatitis C (HCV) infections. While some patients enter the dialysis program with seropositivity for these viruses, most acquire the infection in the course of therapy. The aim of this study was therefore to determine seroconversion rates for HBV and HCV amongst haemodialysis patients in the renal unit of Douala and to identify potential risk factors

Materials & Method: This was a cross-sectional study conducted in the haemodialysis centre of the Douala General Hospital in September 2012. No dialyzer re-use and no isolation policy is practised in the unit. Patients on dialysis for at least 4 months were studied. Relevant patient data was noted. Third and fourth generation ELISA assays were used for HBsAg (BIOREX), and HCV antibodies (BIOREX) respectively.

Results: Ninety-seven patients were included in the study, (64 M, 33F) Mean age was 50.9 ± 13.9 years. The mean dialysis duration was 32,7 ± 27,5 months (range 5 -127). All patients had received blood transfusions on dialysis. The seroprevalences of HBV and HCV were 4, 1%, and 26, 8% respectively. Seroconversion rates were 1, 1% (1 patient) for HBV and 11, 80% (9 patients) for HCV. Only a longer dialysis duration was associated with HCV seroconversion (p=0.003).

Conclusion: The seroconversion rate for HCV is high in our center. HBV seroconversion is low despite the absence of isolation for positive patients. Strict adherence to universal precautions may reduce these rates.

0076

REVIEW OF OUTCOMES OF KIDNEY TRANSPLANTATION IN GHANA

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Background: Kidney transplantation is the treatment of choice for patients with end- stage kidney disease and it is cheaper in the long-term than haemodialysis. Kidney transplantation was started in Ghana in November. Twelve successful transplants have been done so far. All 12 patients were on dialysis before transplantation. The average duration of dialysis was 24months.

Aim: To review the outcomes of live donor kidney transplants performed in Ghana

Method: A retrospective review of 12 patients who underwent live donor Kidney transplant in Korle Teaching hospital in Ghana from November 2008 to April 2012.

Results: The age of the patients ranged between 24 and 57 years (Median age of 40years. The mean serum creatinine at 9months was 106umol/l .There was no delayed graft function. Postoperative bleeding was observed in one patient. There was no vascular, thrombotic or urological complication seen. One patient had severe wound infection leading to gaping of his wound and secondary suturing.

6 (50%) of the patients developed New Onset Diabetes after Transplantation (NODAT). One patient developed graft failure after one year on account of non- compliance. There was no mortality at one year but 2 patients died subsequently. One died from severe gastrointestinal ulceration with a functioning graft and the other from cardiac arrest after 2 years on haemodialysis.

Conclusion: Although the numbers are too small to make any definite conclusions, the outcome of the transplants done so far is good.

0078

PREVALENCE AND EPIDEMIOLOGY OF END STAGE RENAL FAILURE IN CHILDREN

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Introduction: End-Stage-Renal-Failure (ESRF) defines the stage of chronic kidney disease at which Renal Replacement Therapy (RRT) becomes necessary. At ESRF, death becomes imminent from severe uraemic complications and pulmonary oedema. In Ghana like most African countries, chronic RRT for children is non-existent. This may be due partly to under estimation of the magnitude of the problem.

This study was undertaken to determine the prevalence of ESRF among children admitted with kidney disease and to establish the epidemiological distribution.

Method: Retrospective data review of children with kidney diseases admitted to the nephrology unit of KATH over 3-year period.

Results: Fifty-four (9%) of 600 children admitted with kidney diseases had ESRF, 28 males and 26 females.

Thirty-one (57.4%) were aged 10 years or more, 19 (35.2%) between 5 and 10 years. One (1.8%) was < 1 year.

Aetiology could not be established in 53.7% of cases. Chronic glomerulonephritis accounted for 33.3%, CAKUT 5%, urinary schistosomiasis 3.7%. Unresolved AKI and HIVAN accounted for 1% each.

Discussion: Chronic glomerulonephritis continues to be a major cause of ESRF among children in Africa. Most of the children had no prior history of overt renal disease and were presenting for the first time. It presupposes a significant proportion of subclinical disease which could have been detected by simple urine test.

Conclusion: There is significant burden of ESRF in children in Ghana. This calls for the establishment of

Methodology: This is a retrospective study to February 2001 at August 2009. 15 children with steroid-sensitive or steroid- dependent nephrotic syndrome who received Ergamisol were collected.
Results: Nephrotic syndrome was pure in 53, 3% and 46.67% impure. The average age of patients was 10.12 years at the time of using ergamisol. The average age of disease progression was 5.4 years. The Indications of ergamisol was the frequent relapses (80%), non-observance with corticosteroid therapy (7%), partial cortico-sensitivity (7%), a leuconeutropenia during cyclophosphamide treatment (7%). Remission was significantly associated with a lower threshold of corticosteroid (86.67%). the ergamisol stopping was justified in only 1 case by the occurrence of leucopenia
Conclusion: The ergamisol should be popularized in Africa, ensuring the availability of the drug. The possibility of neutropenia requires a monthly biological monitoring.

0010

ASSESSMENT OF QUALITY OF LIFE OF PATIENTS WITH END STAGE KIDNEY DISEASE RECEIVING CHRONIC HAEMODIALYSIS IN MALAWI

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Introduction: Quality of life (QOL) of patients on haemodialysis is often overlooked in developed and developing countries. Traditional dialysis outcomes including haemoglobin, phosphorus and calcium may not be available in developing nations. This study assessed QOL of patients receiving chronic haemodialysis in Malawi.
Methods: This was a cross-sectional study and participants were recruited based on a convenience sampling approach. Patients were included if they had been on dialysis for more than three months in order to ensure their responses were an accurate reflection of the QOL on haemodialysis. We used the kidney disease quality of life short form 36 (KDOQL-SF36) questionnaire to collect QOL data.
Results: Twenty-two out of 25 eligible haemodialysis patients were recruited from three dialysis centres in Malawi: 59.1% were males and their median age was 44 years. The 2 most common causes of end stage kidney disease were diabetes and hypertension (45.5% in total). The median duration on dialysis was 20.6 months. From a possible score of 100, representing optimal QOL, the mean scores for the three main domains of the KDQOL- SF36 were 50.4 (SD 22.8) for the physical composite summary, 61.3 (23.0) for the mental composite summary and 67.9 (13.2) for the kidney disease composite summary.
Conclusion: QOL is poor in haemodialysis patients in Malawi and physical health issues predominate. Possible explanations include the relatively young age of our cohort and short time on haemodialysis. Interventions to improve QOL for haemodialysis patients in Malawi need to be multi-faceted with an emphasis on alleviating physical symptoms.

0011

SLEEP MAY BE CONSIDERED AS A RISK FACTOR FOR CHRONIC KIDNEY DISEASE?

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Introduction: Many studies have demonstrated that the duration of sleep is considered a risk factor predictive of cardiovascular disease, but it was not reported an association between the duration of sleep and chronic kidney disease.
Matériels et méthodes: Study cohort of 142 patients with chronic kidney disease stages 3,4 and 5, aged between 20 and 70 years
Results: Sleep duration base is 6 hours 66% of patients had a sleep duration <5h, 24h proteinuria ≥ 2 g / 24 H with stages 4 and 5 chronic kidney disease outside of kidney glomerular 27% of patients had a duration of sleep between 5 and 6 h, 24 H proteinuria between 1 and 2 g / 24 with stage 4 chronic kidney disease %seven patients had sleep duration ≥ 7 h, 24 h proteinuria <1 g / 24 h, with Stage 3 chronic kidney disease
Discussion: We found that the longer the duration of sleep is less proteinuria worsens, and kidney function deteriorates
Conclusion: The decline in sleep duration could be considered as an aggravating factor and proteinuria a risk factor chronic kidney disease

0012

DIFFERENT TRAJECTORIES DEGRADATION OF RENAL FUNCTION IN PATIENTS WITH CHRONIC KIDNEY DISEASE

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Introduction: The evaluation of the path of progression of renal function stage of CKD to end stage is difficult. Even if it is not possible, effective planning of dialysis and transplantation should be sought. Some evolve slowly while another quickly.Objective: To evaluate the path of progress of GFR of CKD over a period of 3 years before the start of dialysis : estimate the frequency of different trajectories of kidney functionPatients and Methods: Cohort study worn on 102 patients with chronic kidney disease
Results: We dentifié :59.5% of patients had a very low degradation of kidney function with loss of GFR <30ml/mn/1 .73 and an average slope of 8.2 ± 3ml/mn; 27.2% showed a progressive loss of GFR 30-59 ml/mn/1, 73 ml / min and an average slope of 20 ± 2ml/mn/1, 73; 11.2% had an accelerated loss of kidney function> 60 ml/mn/1, 73 (average slope of 35 ± 10 ml/mn/1, 73 ; 2, 1% have undergone a catastrophic loss of GFR> 70 ml/mn/1, 73ml/mn Patients who had suffered a catastrophic deterioration of kidney function were hospitalized or had acute kidney injury superadded to diagnosed .Most patients who did not receive pre dialysis treatment had a higher risk of death in the first year after the start of dialysis.Conclusion:We observed a large heterogeneity in the loss of GFR during the period of 3 years leading to the initiation of long-term dialysis. These results suggest a more flexible approach with regard to planning the management of chronic renal failure.

the inpatient mortality is high and glomerular pathology is the main aetiological factor. Intensification of efforts to detect kidney damage earlier combined with optimised clinical care and improved laboratory services are required to reduce the morbidity and mortality associated with this condition in Malawi.

0020

VERBAL AUTOPSY STUDY IN ADULT GHANAIANS IN THE ASHANTI REGION: PRELIMINARY FINDINGS HIGHLIGHTING THE IMPORTANCE OF CARDIOVASCULAR DISEASE

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Introduction In 2001/02, 1,013 adults [385 men, 628 women], aged 40-75 living in 12 villages in Ashanti, Ghana were studied. Overall, 28.7% had a BP ≥140/90. 125 participants had a GFR < 60 mL/min/1.73 m2.

Methods The 12 villages were re-visited in 2011/12; 208 participants had died. Using the WHO document Verbal autopsy standards [2007], it was possible to identify a respondent for 201 of the deceased (96.6% response rate). Each respondent was interviewed, from which it was possible to assign a WHO category for cause of death.

Results Overall death rate at 10 years was 20.5%: men 29.3% [113/385], women 15.1% [95/628]. Diseases of the circulatory system [VA04] accounted for 54 deaths (25.9%): 28.3% [32] in men and 15.2% [22] in women. Overall, 8.3% [32] of the original 385 men, and 3.5% [22] of the 628 women, died of cardiovascular diseases. 10 deaths were classified as VA07 [Renal disorders].

Conclusions These initial observations show that in a healthy Ghanaian population cardiovascular disease, as defined by verbal autopsy, is an important cause of death. Renal disease, though less common than other cardiovascular causes of death, is nevertheless an important underlying risk factor, potentially amenable to preventive strategies through risk factor modification.

0029

ABNORMAL IGA1 O-GLYCOSYLATION IN A MULTI-ETHNIC POPULATION OF IGA NEPHROPATHY PATIENTS IN KWAZULU NATAL, SOUTH AFRICA.

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Background: IgA nephrology (IgAN) is a leading cause of chronic kidney disease worldwide. The pathogenesis is poorly understood and no curative therapy currently exists. Studies in Caucasian and Asian (Chinese; Japanese) populations, and one of African Americans, describe elevated abnormally degalactosylated IgA1 molecules in sera, exposing the GalNAc antigen. There is a lack of pathogenetic data on IgAN in Africa.

Aim: To study the O-glycosylation of serum IgA1 molecules in a multi-ethnic population of IgAN patients in KwaZulu Natal, South Africa.

Materials And Methods: - An ELISA based lectin binding assay was used to measure and compare the level of IgA1 degalactoslyation between IgAN patients and controls. Participants included individuals of African, Caucasian, Coloured, Indian (predominantly) and mixed-race descent. Nineteen IgAN patients at various stages and 20 healthy controls were recruited between 2005 and 2011. The mean absorbance values were recorded. A non-parametric Wilcoxon matched pairs test was used accordingly. The two-tailed p value was used to assess for statistical significance between the groups.

Results: When all the means of the tests were compared, the average means of the tests of the IgAN patients was 0.3678±0.0790(SEM) which is statistically significantly greater than the normal controls which was 0.2969±0.0586 (SEM) (p = 0.0076). IgAN patients exhibited abnormal IgA1 O-glycosylation with a greater level of terminal degalactosylation of IgA1 in comparison to normal controls.

Discussion: This finding is consistent with that of other populations globally; supporting a universal strategy for therapeutic or curative agents that target this aberrancy.

0031

AN ANALYSIS OF PERITONEAL MEMBRANE TRANSPORTERFUNCTION IN CAPD PATIENTS AT INKOSI ALBERT LUTHULI HOSPITAL, DURBAN, SOUTH AFRICA.

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Background: Peritoneal dialysis remains a practical and cost effective form of dialysis especially in resource limited countries. It is necessary to determine the membrane function in order to tailor the dialysis prescriptions. We analysed the proportion of different membrane types at our facility and compare them with other data from other countries.

Method: The Peritoneal equilibration tests of 53 consecutive patients were interpreted using the Adequest 2.0 programme from Baxter R based on a standard 4 hour test. The tests were performed from October 2010 until May 2011.

Results: There were 30 females and 23 males. The age range was 21 to 64 years and the mean age was 43.4 years. The PET was done between 4 months to 2 years after initiation of chronic ambulatory peritoneal dialysis. High transporters accounted for 31% of patients. High average transporters made up 41% of membranes. There were 26% low average transporters and 2% low transporters.

(modification of the Diet in the renal disease) of patients with CKD (chronic kidney disease) in Guinean. The survey was retrospective and descriptive, back up to 2010 to 2008. 323 cases of CKD were found among the 743 hospitalizations registered on that period. Only the stages III, IV and V of the CKD were considered. The clearances have been calculated by the two formulas: C-GS and MDRDS. CKD prevalence was 43, 5%. The average age of the patients was 47[18-90]. They were 174 (54%) men and 149 (46%) women either a sex-ratio of 1, 2. The average creatininaemia was 672 µmol/L (168-2854). The average valued GFR was 16,2 mL/min by C-GS and 21,1 mL/min by MDRD. According to age, the patients of less than 50 years old were 202 (63%) by C-G and 210 (65%) by MDRD; those of more than 50 years old were 121(37%) by C-G against 113(35%) by MDRD. According to the sex and the CKD stage, they were 11% men, 12% women by C-G, and 5% men, 8% women by MDRD at the stage III. For the stage IV they were 14% men and 15% women by C-G against 11% men and 12% women by MDRD. At stage V the men were 28% the women 27% by C-G against 29% and 27% respectively by MDRD.

0036

TENOFOVIR INDUCED RENAL TUBULAR DYSFUNCTION: A CASE REPORT

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Background: Survival of patients infected with HIV after introduction of HAART has led to discovery of the many side effects of these drugs,Tenofovir is one example and it is a mitochondrial toxin.

Case Report: A 10 year old girl presented with weight loss,weakness of lower limbs,bone pain and skeletal deformities over a period of 6 months.She could no longer walk.She has been on her second HAART regime consisting of Tenofovir,Zidovudine and Kaletra for 3 years.At the time of presentation she had severe muscle wasting,skeletal manifestations of rickets:pectus carinatum,Harrison sulci,splaying of the ends of long bones and a dinner fork deformity of the right wrist. Urine dipsticks showed proteinuria and glucosuria.Urine chemistry tests revealed aminoaciduria,u-phosphate 21.7mmol/l,u-protein:creatinine ratio 0.65 g/mmol,u-β2microglobulin:creatinine ratio 34.4.Blood investigations showed hypokalemic metabolic acidosis with serum-phosphate 0.56mmol/ l,TRP 51.8%, s-creatinine 36µmol/ l,s-calcium 2.38mmol/l,s-ALP 2191 U/l,PTH 51.9ng/l.S-25(OH)D2,25(OH)D3 and 1.25dihydroxy Vit D levels were normal.The results were in keeping with De Toni Fanconi Syndrome X-rays of the long bones showed widening of the growth plate and splaying,fraying and cupping of the metaphysis and Salter Harris V fracture of the right wrist.She was treated with Phosphate Sandoz,one alpha (Alfacalcidol) and sodium bicarbonate.Tenofovir was replaced with Abacavir.After 6 months of therapy her skeletal deformities has largely resolved,height improved:117-124 cm,s-ALP decreased from 2191 to 229U/l. Conclusion:Monitoring of renal tubular function is important in children treated with Tenofovir.Early identification of renal dysfunction or toxicity and withdrawal of the offending drug before the development of irreversible tubular injury is vital.The effects of tenofovir are reversible with withdrawal of the drug.

0037

TREATMENT OF STEROID-RESISTANT NEPHROTIC SYNDROME IN CHILDREN IN RURAL BANGLADESH

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We report two cases of nephrotic syndrome in rural Bangladeshi children (a girl of 2 y and a boy of 3 y). In both cases, the disease did not respond to 4 weeks of high dose oral prednisolone. The girl was steroid-resistant from the outset whereas the boy had an initial episode which responded to conventional oral corticosteroids. The girl had received several second-line agents from a teaching hospital including ciclosporin, which could not be monitored in a rural hospital setting. Both children had severe episodes of sepsis requiring in-patient treatment for intravenous antibiotics.

Both children entered remission 2-9 weeks after commencing a regime of intravenous methylprednisolone pulses and oral cyclophosphamide, based on the so-called "Mendoza regime". They each received a total of 12 weeks of cyclophosphamide at 3 mg/kg/d. Both children remain in remission with a follow-up of 4-6 months.

The management of childhood steroid-resistant nephrotic syndrome can be challenging in resource-rich countries. In rural areas in the developing world, additional difficulties such as limited laboratory facilities and the prohibitive cost of drugs which is usually borne by the family make this a particular challenge. Intravenous methylprednisolone and cyclophosphamide are relatively cheap drugs and may be safely given without plasma biochemistry monitoring. The use of remote paediatric nephrology advice enabled families to remain close to home where concordance with therapy is likely to be enhanced as a result of less economic family disruption

0039

ESTIMATED GLOMERULAR FILTRATION RATE AT INITIATION OF HAEMODIALYSIS IN A NIGERIAN TERTIARY CENTRE.

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Background: Decreasing glomerular filtration rate generally depicts progression of renal disease and renal replacement therapy is indicated as patients approaches end stage renal disease. The GFR of end stage renal disease patients at initiation of haemodialysis varies depending on factors

revealed recurrent treatment for urinary tract infection and reccurrent spontaneous abortions. She had just delivered a pre-term foetus that eventually died of septic complications. Physical examination revealed a young febrile lady, with palor, grade IV digital clubbing and bilateral pitting pedal oedema. Her abdomen was distended with a large tender mass measuring 20cm by 24cm at the right lumbar region extending to her iliac fossa. Dipstick urinalysis showed turbid urine with blood and leucocytes. Complete blood count revealed leucocytosis, haemoglobin 6.6g/dl, platelets 524,000/mm3. Serum creatinine was 0.5mg/dl while urea was 18mg/dl. Abdominal ultrasound scan revealed a right multicystic kidney extending into the pelvis with debris within the cyst . Abdominal CT scan Revealed large multiseptated cystic mass with lobulated margins in the right kidney extending from the right upper quadrant of the abdomen down to the pelvis with enhancement of the septae of the mass. The left kidney was normal and secreted contrast adequately. She had urological intervention with over 3.5 litres of frank pus aspirated.

Conclusion: this case illustrates the importance of identifying a possible underlying disease in patients with recurrent urinary tract infections.

0044

CLINICO-PATHOLOGICAL STUDY OF SICKLE CELL NEPHROPATHY IN NIGERIANS.

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Background: Sickle cell disesase (SCD), a genetically inherited disease, often presents with disabling acute and chronic complications which can occasionally be fatal including kidney disease. This study assessed the relationship between kidney function, renal histopathology and haematologic parameters.

Methodology: The study prospectively screened 70 patients with SCD for the presence of proteinuria (microalbuminuria or overt proteinuria), glomerular filtration rate (GFR) <60ml/min and tubular dysfunction and renal biopsy was performed in those with indications.

Results: The age of the patients ranged between 18 and 56 years (Mean±SD; 27.5±8.9years) with a female preponderance. Of the 70 patients screened, 25 (35.7%) had CKD as defined by GFR <60ml/min and/or proteinuria, 23 (32.9%) patients had GFR <60ml/min and 5 (7.1%) had hyperfiltration GFR >120ml/min; overt proteinuria was found in 4 (5.7%) while microalbuminuria was found in 12 (17.1%). GFR correlated positively with haematocrit (r=0.472;p<0.0001) and BMI (r=0.518; p<0.0001) while microalbuminuria correlated negatively with GFR (r =-0.255; p=0.04). All recruited patients had markedly elevated fractional excretion of potassium (FEK) while 98.6% had elevated fractional excretion of sodium (FENa). Hyposthenuria was present in 85.7%. GFR correlated negatively with percentage sickle cell count(r=-0.616, p<0.0001), FEK(r=-0.448, p<0.0001) and FENa(r=-0.336; p=0.004). Of the 22 successfully biopsied patients, renal histology revealed mesangioproliferative glomerulonephritis in 11 (50%), 6 (27.3%) had minimal change disease, 3 (13.6%) had focal segmental glomerulosclerosis while interstitial nephritis was diagnosed in 2 (9.1%) patients.

Conclusion: Kidney disease is common among SCD patients and is characterized by a preponderance of tubular dysfunction and mesangioproliferative glomerulonephritis.

0045

DEPRESSION AND QUALITY OF LIFE IN PATIENTS ON LONG TERM HAEMODIALYSIS AT THE RENAL AND CARDIOTHORACIC UNIT OF THE KORLE-BU TEACHING HOSPITAL.

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Background: Depression is not uncommon amongst end stage renal disease patients on long term haemodialysis. The disease condition itself, dialysis treatment and incidence of depression all contribute to the poor quality of life in these patients. In Ghana, there is very little data on the prevalence of depression and the quality of life in patients on long term haemodialysis.

Objectives: To assess the prevalence of depression and to assess the quality of life in long term haemodialysis patients

Study Design: This study was a cross-sectional study.

Setting: Dialysis units of the medical block and cardiothoracic centre of the Korle-Bu Teaching Hospital.

Methods: A total of 106 patients (63 males and 43 females) aged 18 years and above participated in this study. Depression was assessed using the Patient Health Questionnaire (PHQ) and quality of life was assessed using World Health Organization quality of life instrument (WHOQOLBREF).

Results: The study sampled 106 patients with a mean age of 48.7±13.3 years. Majority of the population were males (59.4%). The prevalence of depression was found to be 44.4%. Quite a number of our patients (18.9%) had an overall poor quality of life. There was a significant association between overall quality of life and educational status (p = 0.003) and source of income (p = 0.014).

Conclusions: This study found out that depression was common amongst ESRD patients on long term haemodialysis at the Korle-Bu Teaching Hospital. Quite a number of these patients had an overall poor quality of life.

0046

ESTABLISHMENT OF A NATIONAL DIALYSIS AND TRANSPLANT REGISTRY

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pressure (PP), and systolic (SBP) and diastolic blood pressure (DBP), and kidney function in healthy populations is unknown.

Methods: We undertook a cross-sectional study in 944 inhabitants of 12 villages in the Ashanti region of Ghana [men 355, women 589; aged 40-75 years]. Data collected included demographics, height, weight, BP and GFR.

Results: The characteristics of the population were: age 55(11) [mean(SD)] years, men 38%, semi-urban village-dwellers 51.7%, diabetes 1·5%, BMI 21(4)kg /m2, 24hour CrCl 84(23)ml/min/1.73m2. 29% had BP >140/90mmHg; SBP and DBP were 125/74(26/14) mmHg, PP was 51(17) mmHg. PP increased with age by 0.55(0.46 to 0.64) mmHg/year. PP was higher (53(17) v 49(15) mmHg; p<0.001) in the semi-urban participants. GFR decreased with increasing PP [-0.19 (-0.27 to -0.10) ml/min/1.73m2/ mmHg] and SBP [-0.09 (-0.14 to -0.03) ml/min/1.73m2/mmHg]; there was no significant relationship with DBP [-0.04 (-0.15 to 0.06)]. After adjusting for SBP the relationship between GFR and PP became steeper [-0.31 (-0.50 to -0.12) ml/min/1.73m2/mmHg]. GFR increased, though not significantly, as SBP increased after adjusting for PP [0.09 (-0.03 to 0.21) ml/min/1.73m2/mmHg]. Using multivariate regression analysis that included PP, age, gender, BMI, only increasing age [-0.75 (-0.88 to -0.62)] and decreasing BMI [0.50 (0.17 to 0.82)] were significantly associated with decreased kidney function.

Conclusions: In this cross-sectional study of a homogeneous West-African population, PP increased with age and had a better relationship with declining kidney function than SBP or DBP.

0055

RENAL BIOPSY PATHOLOGY SERVICES AND SPECTRUM OF RENAL DISEASES AT A PRIVATE REFERRAL LABORATORY IN KENYA

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Renal biopsy and renal pathology services are generally inadequate in most parts of Africa. In turn, data on diagnosis made on renal biopsies is also scant. The author presents his experience over a period of about two years since introducing renal pathology services at a private independent laboratory in Nairobi, with a series of up to 100 biopsies evaluated. A small proportion of cases had immunofluourescence or immunohistochemical studies done as adjunt. FSGS, MCD, lupus nephritis, acute tubule-interstitial nephritis, membranous glomerulonephritis and MPGN are the commonest diagnoses made. In some instances, pathological diagnoses led to identification of systemic conditions previously undiagnosed clinically e.g. paroxysmal nocturnal hemoglobinuria and plasma cell dyscrasia. Transplant biopsies were <10% of cases with acute humoural rejection being the commonest diagnosis. The presentation highlights some of the challenges faced in resource constraint settings where renal biopsies have not taken root as a routine in patient evaluation where indicated. There is a need to increase awareness and promote the utilization of renal biopsies for patient work-up.Clinicians and pathologists need to coordinate in widening access to this important service to patients.

0057

HEPATITIS B ASSOCIATED NEPHROPATHY (HBVAN) IN A TERTIARY HOSPITAL IN SOUTH WEST NIGERIA.

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Background: There are few reports on HBVAN in Nigerian children.

Methodology: A retrospective study of HBsAg seropositve children managed for kidney disease in our hospital between January 2006 and December 2012 was performed.

Results: 16 children (12 males), aged 3 -13 (mean 9.4 ± 2.8) years were identified. The clinical presentation were nephrotic syndrome (NS) in 11 children, glomerulonephritis (GN) in 4 and acute kidney injury (AKI) in another child. Among children with GN 2 needed dialysis at presentation, on account of end stage kidney disease (ESKD) or AKI each occurring in 1 child. 9 renal biopsies were performed and showed minimal change disease (n=4), FSGS (n=3), and MPGN (n=1) in the children with NS; and Focal Global Sclerosis in a child with GN. Management of NS included use of corticosteroids in 9 patients combined with the use of lamivudine in 3. 1 child with GN received corticosteroids and this was combined with lamivudine. Remission occurred only in 8 children with NS and it followed steroid therapy in 7, and was spontaneous in 1 child. 5 children who were not in ESKD at presentation progressed to ESKD, 3 children with NS and 2 with GN. 2 of the children with NS and progression to ESKD had FSGS and steroid resistance while the third did not receive corticosteroid therapy.

Conclusion: In Nigeria the clinical picture of GN, steroid resistance and FSGS appear to be poor prognostic factors in HBVAN.

0058

THE CHALLENGES OF ESTABLISHING A KIDNEY TRANSPLANT PROGRAM IN SUB-SAHARAN AFRICA: EXPERIENCE FROM THE FIRST CASE IN ILORIN IN THE NORTH-CENTRAL ZONE OF NIGERIA

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Backgroung: Kidney transplantation is the best treatment for patients with end stage kidney disease. It offers better quality of life and cost savings compare with dialysis.In Nigeria with 160million population and ESKD burden of 10% of hospital admissions, 161 cases have so far

multicentric study exploited histological kidney biopsy of sickle cell patients followed in Nephrology Departments of Dantec hospital and Child Fann hospital Albert Royers. Diagnostic, histological, therapeutic and evolutif data are. exploited.

Results: on 292 kidney biopsies, 11 were made to sickle cell anemia patients (6SS, 1 SBth+, 4 AS) with 23,1-year-old average [13-51 years]. All had impur nephrotic syndrome with hypertension (1case), microscopic hematuria (11cases) and renal insufficiency (6 cases). The focal segmental glomerulosclerosis (5 cases) dominated, followed by the association specific lesions (hypertrophy glomerular, peri-tubular) to minimal glomerular damage (3 cases), membranoproliferative glomerulonephritis (2 cases) and the extra-membraneous glomerulonephritis (1cas). Under treatment, evolution was marked by 7 complete remissions and 1 death. Three patients were lost sight.

Conclusion: practice of kidney biopsy are uncommon, and main indication was impur nephrotic syndrom. Histological renal lesions are variable, dominated by focal segmental glomerulosclerosis. Kidney biopsy, keep significatif interest, in sickle cell nephropathies, where the interest to revised indications.

0063

PATTERN OF DYSLIPIDEMIA IN NIGERIAN CHRONIC KIDNEY DISEASE PATIENTS

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Background: Cardiovascular diseases (CVD) are common in patients with chronic kidney disease and they are likely to die of cardiovascular complications before developing renal failure. One modifiable risk factor for CVD in CKD patients is dyslipidemia. Unfortunately dyslipidemia, which contributes greatly to the cardiovascular risk in CKD patients, is often an underestimated problem.

Methods: Patients with CKD stages 1- 5 had samples for serum lipid profile collected after an overnight fast of 8 - 14 hours. Samples were separated within 3 hours of collection and kept in refrigerator at 40C. Total cholesterol and HDL were assayed using enzymatic substrate method, while LDL was estimated using Friedwald formula. The glomerular filtration rate of each patient was estimated from serum creatinine using Cockcroft and Gault formula.

Results: One hundred participants, mean age 38.4±12.6 years, were recruited into the study. Eleven percent were diabetic while 82% had hypertension. Eighty four (84%), 95%CI 76.7 - 91.3%, of the participants had at least one lipid fraction deranged. Total cholesterol and LDL-c was elevated in 29%, high total cholesterol and triglyceride found in 7%, high total cholesterol and low HDL in 9%, 23% had elevated LDL occurring simultaneously with a low HDL. All the participants with stage 1 CKD had dyslipidemia; 90.0% of stage 2, 85% of stage 3, 74.3% of stage 4 and 89.3% of stage 5 patients had at least one fraction of the lipids deranged.

Conclusion: Dyslipidemia is common among our chronic kidney disease patients and therefore requires active treatment in the Nigerian CKD population.

0065

DIABETES, FIRST CAUSE OF SECONDARY NEPHROTIC SYNDROME OF ADULTS IN DAKAR

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Introduction: The nephrotic syndrome is the common mode of exposure of chronic glomerulopathies. The diabetic nephropathy, is the second cause of renal failure in Senegal. The aim of this study is to determine epidemiological, clinical, biological and etiological profiles of secondary nephrotic syndrome.

Methods: The paper is based on a retrospective survey carried out in the Nephrology service of Aristide Le Dantec Hospital of Dakar over a 10 year period (2001-2010). A total of 47 patients with secondary nephrotic syndrome were surveyed. Demographic, clinical, biological and etiological data were analysed.

Results: The hospital prevalence of secondary nephrotic syndrome was 23%. The average age was 42 years with a sex raio of 2,4. The oedema was found in 44% of cases.The High blood pressure was found in 38% of cases. The serum protein and albumin 48,5g/l and 20g/l respectively. The average serum creatinine was 12 mg/l, the average blood urea was 0,36 g/l. An impaired renal function was found in 44% of patients with mean serum creatinine clearance of 28,9ml/mn. The average proteinuria was 4,2 g/day. The Diabetes was found in 37,5% of cases, Hepatits B in 29,2% and Sickle- cell disease in 12,5% of cases.

Conclusion: The Diabetes is a significant cause of renal failure in our country. The early prevention of diabetic nephropathy appears to be mandatory before the appearance of nephrotic syndrome because, blood dialysis is hard to get to and renal transplantation is still at the project stage.

0066

ANATOMOCLINICAL, THERAPEUTIC AND EVOLUTIONNARY ASPECTS OF PRIMITIVE NEPHROTIC SYNDROM IN DAKAR.

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Introduction: The nephrotic syndrom is the most common mode of exposure of chronic glomerulopathies which account for nearly half of chronic kidney failure observed in Africa. The objective of this piece of research is to determine epidemiological, clinical, biological, histological, therapeutic and evolutionnary profiles of the primitive nephrotic syndrom.

Methods : The paper is based on a retrospective survey

diagnosis and Support of the care

Materials And Methods We conducted a retrospective multicenter study in period from 1 January 2010 to 31 December 2010. Patients hospitalized for non-tumor kidney disease were included.

Results We have recenced 85 patients on 6964 hospitalized, 1.2 % with a 2.14 ratio. Children aged 5 to 10 years accounted for 42.4 % of the sample.

The Pathologies Encountered Were: Acute glomerulonephritis in 27 patients, nephrotic syndrome child in 25 cases, urinary tract infection in 22 cases, the single renal cyst and nephrolithiasis in 1 case, acute renal failure in 19 children with chronic renal failure in 8 patients. The death rate in the CKD was 62.5 %.

Discussion The predominance of glomerular pathology was described in our study, as in the literature. Prevention and first management of this causes could reduce the incidence of chronic kidney disease.

Conclusion The opening of a pediatric nephrology unit is the key of management in renal disease in our teaching hospital .

0071

LUPUS NEPHRITIS CLASSS IV OF ISN/RPS IN A GIRL AGED 15 YEARS IN PEDIATRY OF TEACHING HOSPITAL ARISTIDE LE DANTEC

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Introduction We report a case lupus nephritis class IV of WHO in a girl of 15 years.

Observation He is a 15 year old girl, hospitalized for discoid lesions of the scalp, with red hair and alopecia , erythema and cheekbones vespertilio in area exposed to sunlight, stains hyperchromic thorax and abdomen, purpuric spots of palms; infiltration syndrome (oedema, ascites) polyarthralgia knee and hip, a inflammatory micropolyadenopathy localised cervical and axillary, anemic, retard pubertal P1S1; cachexia. In biology, the NFS show a normocytic anemia, VS: 120 H 1 , CRP :6 mg / l, proteinuria of 24 hours: 93.9 mg/kg/24h, serum protein 42 g / l, albumin: 23 g / l, normal renal balance. Anti Sm Ab was positive. Histology showed glomerular lesion class IV of WHO, global diffuse proliferative, with complete activity and discreet tubulointerstitial lesion . The IF was not was made. Treatment based relay with bolus corticosteroids oral bolus of endoxan and hydroxychloroquine. The short-term outlook was favorable.

Discussion Our observation exposed the difficulty in management of the several NL
children.

Conclusion We report our first case of lupus nephritis in children has evolved under treatment.

0075

FUTILITY OF SCREENING FOR HYPERTENSION AND URINARY ABNORMALITIES IN YOUNG NIGERIAN GRADUATES

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Background The National Youth Service Corps (NYSC) statutorily obliges Nigerian graduates of tertiary institutions below 30 years to work for one year outside their geo-ethnic origins, allowing their periodic gathering at orientation camps. These 'youth corpers' occasionally manifest hypertension, kidney disease and diabetes on routine screening. Therefore, a survey was conducted to determine effectiveness of screening in this population for kidney disease and hypertension, to facilitate early intervention.

Methodology Over three weeks, young Nigerian graduates of tertiary institutions at 2008 Kaduna NYSC orientation camp were evaluated for evidence of kidney disease. Demographic profiles, medical history and blood pressures were recorded, followed by random dipstick urine test for albumin, sugar, blood, and nitrite. SPSS version 16 was used for the analysis.

Results 201 out of 1200 graduates participated in the screening. M: F = 110:91; age ranged from 22-41 +3.5 years. Ethnic origins: Hausa 20 (10%), Yoruba 41(20.4%), Ibo 64 (64%) other ethnic tribes 76 (37.8%). Personal history of hypertension, diabetes or kidney disease was negative. Parental hypertension, diabetes and kidney disease occurred in 38%, 68.2% and 5% respectively. SPB 80-150, mean 97+12 mm Hg, DBP 50-100, mean 63+9 mm Hg. BP >140/90 mm Hg present in only 2(0.9%). Dipstick proteinuria, in only 10%; haematuria in 3%, nitrite test in 1.5%. None had glycosuria.

Conclusions Hypertension and urinary abnormalities are rare in this young literate population and may not be cost-effective tools for kidney disease screening. The seemingly high prevalence of parental hypertension and diabetes has been validated in several studies.

0077

PATTERN OF GLOMERULAR DISEASE IN ADULT PATIENTS IN GHANA

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Background : Glomerulonephritis has been reported as a major cause of end-stage renal disease in tropical Africa but there is little recent information about the types of glomerular disease seen there.

Methods: A retrospective review of 121 native renal biopsies performed on patients in Korle-Bu Teaching Hospital Nephrology Unit in Ghana from January 2009 to August 2012. All biopsies were studied by light and immunoperoxidase microscopy.