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REVERSIBLE RENAL FAILURE IN HYPERTENSIVE IDIOPATHIC NEPHROTICS TREATED WITH CAPTOPRIL

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Angiotensin converting enzyme inhibitor (ACEI) – induced acute renal failure (ARF) is not as commonly reported in children as in adults. We report two cases of idiopathic nephritic syndrome (INS) that developed ARF following captopril (an ACEI) treatment for prednisolone-induced hypertension. The two cases further alerted to the potential risk of ACEI-induced ARF in any nephritic child on ACEI treatment.

It is concluded that low or high – dose ACEIs should be given with extreme caution in nephrotics who are yet to achieve remission in view of their relative hypovolaemic state that may provoke ARF. Nephrotic children, who must be treated with ACEIs with or without diuretics, should routinely be closely monitored for both clinical and biochemical evidence of ARF so that early drug withdrawal and management of the ARF can be effected.

LUPUS NEPHRITIS IN NIGERIANS: IS IT A DIFFERENT VARIANT?

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Background: Systemic Lupus Erythematosus (SLE) and its renal complications are recognized to be common in blacks worldwide but relatively uncommon with very sparse literature in our setting. We set out to determine the clinical pattern, presentation and outcome of these patients in our centre.

Methodology: Case records of all suspected cases with proteinuria or renal failure managed in the last 10 years were retrieved and those that fulfilled any 2 of the inclusion criteria were selected. These criteria include.

1. Fulfilment of ACR criteria for diagnosis of SLE and/ or
2. High Anti nuclear antibody titre or positive LE cell determination
3. Markedly elevated ESR

Their socio-demographic and clinical characteristics, renal histological findings and outcome are hereby presented.

Results: A total of 12 patients satisfied the inclusion criteria. All of them were females and their ages ranged between 15 and 52 years (Mean + SD; 28.75 + 11.78 years). The commonest presenting symptom was body swelling observed in 10 (83%) patients. Only 2 had classical butterfly rash while another 2 had discoid rash. Six (50%) of the patients satisfied ACR criteria for diagnosing SLE while another 6 (50%) had elevated ANA titres. Only 2 patients were positive for LE cells. Seven (58%) patients were in Chronic renal failure at presentation though only 2 had uraemic encephalopathy. Their systolic, diastolic and mean arterial blood pressures are 133.75 + 19.43 mmHg, 80.17 + 17.3 mmHg and 104.02 – 17.4 mmHg respectively. The mean endogenous creatinine clearance, serum creatinine, urea, ESR, PCV and 24 hour-protein excretion were 48.93 + 33.53 mls/min, 309.1 + 302.5 mol/L, 18.76 + 12.22 mmol L, 118.5 – 43.4 in 1 Hr (Westergreen), 30.55 + 7.24% and 3.61 + 2.24g/day respectively. Renal histology findings include Diffuse Proliferative GN in 3 (25%), Membranoproliferative GN and minimal change disease in 1(8.3%) patient each. Six (50%) patients are alive and well (2 of them in ESRD), 4 (33%) died from various complications and the remaining patients were lost to follow up.

Conclusion: Lupus nephritis is rare in our patients and clinical presentation is late. Response to immunosuppressive therapy is good if commenced early hence the need for a high index of suspicion.

SEVERE LUPUS NEPHRITIS: MANAGEMENT PROBLEMS IN A DEPRESSED ECONOMIC ENVIRONMENT

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A 28 year old Nigerian female hair dresser was admitted with clinical and serological features consistent with Systemic Lupus Erythematosus. She had been kept in a spiritual church over the preceding two weeks on account of irrational talk and behaviour believed to have been of spiritual origin. Renal function evaluation revealed significant impairment and patient was overtly uraemic at presentation. Patient poor financial background constituted considerable managerial problem. However, with the intervention of "good Samaritans", which included some member of the managing team, patient was able to benefit from a regimen consisting of Intravenous Pulse methyl Prednisolone, oral Prednisolone and Azathioprine. Patient was well enough to resume her normal duties after 10 weeks on treatment with normalization of her renal function. The case report is here presented to illustrate how judicious application of scarce resources in a depressed economy can achieve a satisfactory outcome in the management of severe lupus Nephritis.

NEPHROPATHY, POLYNEUROPATHY, AND GASTROENTERITIS IN A CHILD WITH CHURG-STRAUSS SYNDROME.

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Churg-Strauss syndrome is a serious but rare pauci-immune vasculitis of small and medium-sized blood vessels. It is commonly seen in association with bronchial asthma and/or allergic disorders. The syndrome is characterized by presence of asthma, eosinophilia and vasculitis in any part of the body. Vasculitis is often associated with significant distortion of normal body functions. A rather severe case of Churg-Strauss syndrome in an 8 - years old Nigerian girl with asthma and allergic rhinoconjunctivitis is reported. She presented with multiple morbidities namely, vasculitic polyneuropathy, and nephritic-nephrotic syndrome that eventuated in acute renal failure following onset of vasculitic gastroenteritis. Routine screening of all asthmatic patients for Churg-Strauss syndrome is advocated.

HYPERTENSION, ERYTHROCYTURIA, AND PROTEINURIA IN CHILDHOOD NON-HODGKIN'S LYMPHOMA

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Aim: The objectives were to determine the prevalence and outcome of hypertension, significant microerythrocyturia and proteinuria among children with acute renal failure (ARF) due to Burkitt-type non-Hodgkin's lymphoma (BNHL).

Methods: A retrospective analysis of clinical and laboratory data of children with BNHL/ARF was undertaken.

Results: Nine of 23 (39.13%) BNHL/ARF children aged 5-14 years were found to have significant microerythrocyturia and proteinuria as urinary markers of glomerulonephritis (GN). Eight of 9 were hypertensive with hypertensive encephalopathy (HTE) in 3, and congestive heart failure (CCF)/pulmonary oedema in 6. Three of 9 patients (33.3%) died from these complications: two from CCF and one from a combination of CCF and HTE. Treatments with cytotoxic drugs and anti-tumour lysis syndrome therapy resulted in normotension, improved clinical outcome and normalization of laboratory features of ARF and GN in all the 5 (55.6%) survivors.

Conclusions: We conclude that children with kidney enlargement and/or renal function impairment due to BNHL should be screened routinely for hypertension and urinary markers of GN. This is important because severe undetected and untreated hypertension may prove fatal when complicated by hypertensive encephalopathy and/or hypertensive heart failure. Similarly, pulmonary oedema resulting from severe proteinuria may also be fatal.

STANDARDS OF RENAL CARE OF DIABETICS IN A NIGERIAN TEACHING HOSPITAL

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Background: Current clinical practice guidelines (CPG) recommend that individuals at increased risk of developing chronic kidney disease (CKD) be screened for markers of kidney damage and have the levels of their glomerular filtration rate (GFR) estimated. We audited the adherence to these recommendations in a Nigerian teaching hospital. **Methodology:** Records of 167 (72 males and 96 females) consecutive type 2 diabetics attending the Diabetes Clinic at the Jos University Teaching Hospital from December 2003 to June 2004 were reviewed after 12 months of follow up. Variables of interest included screening for the presence of hypertension, peripheral vascular disease, retinopathy, nephropathy and the treatment of hypertension and the use of ACEI/ARB. BP control at 12 months was also recorded.

Results: One hundred and seven (63.3%) were hypertensive and 54 (31.9%) were non-hypertensive Bp was not recorded in 8 (4.7%) of the patients. Seventy-nine (46.7%) had serum creatinine assayed on them while 72 (42.6%) had urinalysis done. No patient had GFR estimated. Seventy-nine (73.8%) of the hypertensive were on antihypertensive with only 60.8% being Angiotensin Converting Enzyme Inhibitor based. Only 51% of the patients on antihypertensive had good blood pressure control.

Conclusion: Adherence to international guidelines on the management of diabetics attending a tertiary centre in Nigeria is poor and blood pressure control remains unsatisfactory. The majority of diabetics in this centre run the risk of undetected CKD.

CARDIOVASCULAR RISK PROFILE IN CHRONIC KIDNEY DISEASE PATIENTS

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Introduction: Cardiovascular disease is the leading cause of death in chronic kidney disease population. It accounts for more than 50% of all deaths in this group of patients consequently its diagnosis, prevention and treatment is of paramount importance. We sought to determine the prevalence and pattern of cardiovascular risks in our CKD patients.

Materials and Methods: Twenty five consecutive patients with GFR less than 60mls/min (CKD 3-5) for at least 3 months were recruited. They had sociodemographic, clinical and anthropometric evaluation and the data obtained was collated. Baseline serum chemistry, haemogram, electrocardiography and echocardiography were also carried out. Data were analysed using SPSS package version 11.

Results: their ages ranged between 18 and 76 years (MEAN±SD; 41.04±16.32 years) and majority (56%) of them were males. Despite the fact that only 52% had family history of hypertension, 96% were hypertensive. Mean GFR was 15.6±13.52 mls/min and mean DBP were 156±25.80mmHg and 101±19.35 mmHg respectively. Packed cell volume correlated with GFR and total protein (p<0.01). We also found a correlation between DBP and serum creatinine 32% of the patients had isolated LVH while another 32% had LVH and

CCF, 12% had IHD and CCF while another 12% had CVD and CCF. Risk factors for cardiovascular disease found included increased waist hip ratio and elevated BP.

Conclusion: The burden of cardiovascular risk is high among our CKD population. Its treatment and prevention should be aggressively pursued to reduce morbidity and mortality.

RENAL DISEASE IN A TERTIARY HOSPITAL: A ONE YEAR HOSPITAL-BASED DATA ENTRY ANALYSIS

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Background: Adequate management of renal diseases depends upon proper planning, which in turn depends on an adequate database. To this end, a well developed Registry of Renal Disease becomes mandatory for all geographical locations of the world. The dearth of baseline data in developing countries like Nigeria necessitates the urgent provision and utilization of a simple data collection proforma which can be developed and widely utilized at secondary and primary health care levels.

Methodology: A simple data collection tool was used to gather information on renal diseases in a tertiary health facility over a period of 12 months. Data entered from 23 new cases of clinically diagnosed renal disease admitted to the Renal Unit of the UCH were analysed.

Results: There were 12 (60%) males and 81(40%) females with ages ranging between 15 and 85 years (mean 41.6 + 15.4 years).

Cases were broadly classified into: Acute Renal Failure (ARF, n = 30), Chronic Renal Failure (CRF, n=164), and nephritic Syndrome (NS, n=9). Identified causes of ARF were Sepsis 12(40%), Diarrhoea and/or vomiting 11(37%), Pregnancy related causes 2(7%), Acute Obstructive Uropathy 2(7%), Nephrotoxic Drugs 1(3%), and Undetermined causes 2(7%).

Aetiological causes of CRF were Chronic Glomerulonephritis (CGN) 63(40%), Hypertensive Nephrosclerosis (HTNS) 62(36%), Diabetic Nephropathy (DN) 15(9%), Other Minor Causes 19(11%), and Undetermined Causes 6(4%). Majority of the males were between 20-40 years whereas majority of the females were between 30-60 years. A slightly higher % of males presented with a presumptive diagnosis of HTNS (39%) than with CGN (38%) whereas more females presented with CGN (42%) than with HTNS (31%). Thirteen (43.3%) of ARF cases were dialysed, 3 of whom died in hospital. Eighty one (49.3%) cases of CRF were dialysed; 15% died in hospital, 55 were discharged home, with only 36 of them seen at follow-up at 3 months.

Conclusion: Chronic renal failure constitutes the majority of cases of renal disease seen in our hospital setting CGN and HTNS being the 2 commonest causes followed by DN. Sepsis and hypovolemia are the two commonest causes of ARF.

A coordinated effort should be made to external data collection to both the secondary and primary health care facilities.

DILEMMA IN THE MANAGEMENT OF A NEPHROTIC PATIENT IN THE THIRD WORLD

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A 21 year old Nigerian male student was admitted into male medical ward of UBTH with features of Nephrotic syndrome. His 24 hour urine protein was 9.3g and there was no associated haematuria. He was

also normotensive with normal renal function. At renal biopsy a full length core of cortex (2cm) was obtained at first pass and sent for histological evaluation. This was reported as Membrano-Proliferative Glomerulonephritis. However, patient was still given a course of steroid in spite of the renal biopsy report. Full remission of his Nephrotic state was achieved, with no proteinuria during follow-up in the out patient clinic at 6 weeks. The apparent discordance between clinical and histological evaluation in this case is discussed to support the notion that when faced with a diagnostic dilemma of this nature in a developing world, more emphasis should be placed on ones clinical acumen.

DIAGNOSTIC AND MANAGEMENT PROBLEMS OF MPGN IN DEVELOPING COUNTRIES: A CASE STUDY.

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Background: Membranoproliferative Glomerulonephritis (MPGN) is the commonest histologic type seen in adults with nephritic syndrome in Aminu Kano Teaching Hospital. Potential secondary causes are many, posing diagnostic problems in the setting of limited laboratory investigations. Treatment of MPGN is often controversial. We studied one patient to illustrate the diagnostic and management problems of MPGN in our environment.

Case Summary: A 33 – year – old businessman was referred to us from a private hospital with a diagnosis of CRF, for haemodialysis. He was found to be uraemic, requiring salvage sessions of haemodialysis. Investigations revealed normal renal sizes bilaterally. He had renal biopsy on OPD basis, which revealed features of membranoproliferative glomerulonephritis (MPGN) on light microscopy. Investigations, though limited, revealed no apparent secondary cause.

He was started on oral prednisolone, which was discontinued later due to GI side effects. He was then placed on oral cyclosporine and later dipyridamole with regression of proteinuria. He remained in remission until he was lost to follow 1 and half years later. We discuss the challenges and limitations of the management of MPGN in this environment.

MIDLINE GRANULOMA WITH NEPHROTIC SYNDROME: A CASE REPORT

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Background: Midline granuloma is a rare disease characterized by localized inflammation, destruction and often mutilation of the tissues of upper respiratory tract and face. It may be difficult to differentiate this disease from Wegeners granulomatosis although the absence of vasculitis in biopsy specimens as well as lack of renal involvement characterizes midline granuloma. However, we report a patient who presented with clinical and histologic features of midline granuloma associated with nephritic syndrome.

Case report: A 27 year old male banker referred from the ENT unit with a diagnosis of midline granuloma associated with generalized body swelling. There were no uraemic symptoms or other symptoms suggestive of cardiac decompensation. Investigations revealed nephrotic syndrome with unremarkable glomeruli on light microscopy. We discuss this unusual presentation and the diagnostic and management problems encountered.

RENAL TRANSPLANTATION UNDER SPINAL ANAESTHESIA, AN EXPERIENCE WITH FOURTEEN CASES AS PART OF PORTSMOUTH INITIATIVE OF ESTABLISHING RENAL TRANSPLANTATION PROGRAM IN SUDAN

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Introduction: Due to limited resources and lack of sophisticated intra-operative monitoring, the indication for spinal anaesthesia in Sudan was extended to include renal transplant in old and chronically debilitated patients. The main limitations are hypotension, risk of intrathecal bleeding in end stage renal failure patients who are prone to platelets dysfunction and post operative headache. Nevertheless spinal anaesthesia may ensure reliable and cheap method of monitoring the patient intra-operatively, with smooth and quick post operative recovery.

Material and Methods: Fourteen live donor renal transplants were performed under spinal anaesthesia between June 2002 and September 2004. The indications were old age, diabetes, and hypertension. The patients had adequate intravenous fluids and were closely monitored with CVP and intra-arterial lines. The patients were followed up for a period of 26 months. Patient's notes were reviewed for data collection and analysis.

Results: Muscles relaxant and analgesia were adequate in 12 out of 14 patients. 2 patients required conversion to general anaesthesia. None of the patients experienced hypotension or intrathecal bleed. Immediate diuresis was observed following reperfusion and prior to ureteric anastomosis in 9 patients. The post-operative recovery was smooth and un-aided in those patients who did not require conversion to general anaesthesia. One patient died 3 months following surgery as a result of CMV pneumonitis.

Conclusion: Spinal anaesthesia is a viable option for renal transplantation when indicated. The procedure is safe and well tolerated by the majority of the patients, however an experienced surgeon should undertake the procedure due to time limitation.

ACUTE RENAL FAILURE IN THE INTENSIVE CARE UNIT – AETIOLOGICAL FACTORS, MANAGEMENT AND OUTCOME.

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Aim: This prospective study was undertaken to evaluate the clinical presentations and factors that influence survival of ARF patients in the ICU.

Methods: All patients admitted to ICU during a 2 year period were screened and those with rising serum urea and creatinine above 8 mmol/L and 140 umol/L respectively were recruited. The patients were taken through thorough clinical evaluation and input/output assessment. They also had serial biochemical and haematological assessments done. Some of the patients had haemodialysis while others were not dialysed for logistic reasons. Severity of ARF was assessed using Liano prognostic scoring and modified APACHE II prognostic scores. Data was analysed using SPSS package.

Results: A total of 40 patients were recruited, this included 28 [70%] males and 12 [30%] females. 30% of the patients had head injury while 20% had major burns. Multiple fractures accounted for only 10%. The Liano scores ranged between 33% to 99% [mean of 61%±4.2] while modified APACHE II score range was 5-19 [mean of 11±3.2]

There was a significant correlation between the Liano score and the outcome [$p < 0.007$] as those with lower scores survived and vice-versa while the modified APACHE II score did not influence the outcome [$P > 0.005$].

In all 8 (20%) patients survived and dialysis therapy significantly influenced outcome as more of the dialysis patients survived. In addition 80% of our patients who had two or more organ failure died.

Conclusion: ARF still presents a continuing challenge to the clinician in the ICU with its attendant high morbidity and mortality.

PRE AND POST OPERATIVE NURSING CARE PLAN IN RENAL TRANSPLANTATION

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Renal transplantation remains the gold standard renal replacement therapy offering the best quality of life. It commenced in the country five years ago and the number of transplanted patients has steadily increased. Nurses play very significant roles in the management of these patients. We present the pre and post operative nursing care plan in our transplanted patients. It is our belief that their management and outcome will be a guide for subsequent transplant patients.

Pre-transplant, the following were identified in both the donor and recipient; Impaired Adjustment, Care giver role strain, Defensive coping, Ineffective coping community, Anxiety, fear and Body Image Disturbance. Altered Tissue Perfusion (Renal) and Risk for infection were peculiar to the recipients.

Post Renal Transplant problems include; Anxiety, Fear, Pain and Potential Problems of Immobility were identified in both the donor and Altered Tissue Perfusion (Renal) and Altered Nutrition was identified in the recipient. Glycaemic stability was peculiar to the diabetic patient.

HIV ASSOCIATED NEPHROPATHY (HIVAN) IN NIGERIANS: PREVALENCE, CLINICAL FEATURES AND HISTOPATHOLOGY.

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Background: The incidence and prevalence of HIV/AIDS in Nigeria had increased in the last decade. Unfortunately, information on its renal sequelae is sparse in the country. We aim to determine the occurrence and clinical features and pathology of HIVAN in our patients.

Method: Four hundred consecutive HIV/AIDS patients were screened over a 14 month period for renal disease using at least 1+ albuminuria and/or elevated serum creatinine. Their socio-demographic data and clinical findings were obtained and documented. Their full blood count (FBC), CD4⁺ count, serum electrolytes, serum creatinine, serum proteins and total cholesterol were also carried out. Renal biopsy was done in 10 of the patients with renal disease. Thereafter 30 consecutive HIV/AIDS patients with renal disease were later compared with another 30 consecutive HIV/AIDS patients without renal disease to determine the risk factors for nephropathy. Statistical analysis was done using SPSS version 10.0.

Results: The occurrence rate of HIVAN was 38%. The age range was 19 to 65 years (Means±SD; 35.80±10.01 years) and the prevalence was higher in females 78(51.3%) than males 74 (48.7%). The commonest symptoms seen were vomiting 50 (32.9%), pruritus 38(25.0%), hiccups 26 (17.1%) and leg swelling 27 (24.3%). Systolic and creatinine and 24 hour protein excretion were 18.5 ± 3.1 Kg/m², 25.26%, 246.49 ± 192.8 cells/μL, 210.11 ± 337.8 μmol/L and 2.57 ± 2.42g/day respectively.

There was significant difference in marital status, educational status and creatinine clearance less than 60ml/min between HIVAN patients and controls. HIV-FSGS with glomerular collapse was the predominant pathological finding in our patients.

Conclusion: The prevalence of HIVAN in Nigeria is high and is almost of equal proportion in males and females. The pathology seen in our patients is similar to that in blacks elsewhere.

THE CHALLENGES OF PREGNANCY IN A RENAL TRANSPLANT PATIENT: A CASE STUDY

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Background: As renal transplant centers are coming up in the country and more patients are returning home for follow up after transplant abroad, more challenges will be faced by Nephrologists in the management of post transplant patients. We reports a successful pregnancy through a spontaneous vaginal delivery in a transplant patient and the challenges faced during the management of the patient.

Case Report: S. A. is a 23 years old para 1 + 1 who had a live related renal transplant in our center three and a half years ago. Her donor being her sister who is a schoolteacher with a favourable HLA typing with 3 antigen match at locus A, B and DQ. Both T and B-lymphocytes cross matches were negative. Her immunosuppressive regimen consisted of cyclosporine, Azathioprine and Prednisolone. She has maintained a stable renal function with no rejection episode since transplant. She was offered contraceptive counseling and was placed on progesterone only oral contraceptive until 2 years after transplant when she wished to conceive. She satisfied all the recommend criteria for pregnancy post transplant as published by the EBPG for renal transplant. She conceived after 2 months of stopping oral contraceptives. She developed urinary tract infection, dyslipidaemia anaemia and later a mid trimester spontaneous abortion. This index pregnancy was conceived 33 months post transplant. Both the obstetrician and the transplant physician supervised the pregnancy. She had monthly urine culture, urea, electrolytes and creatinine, blood pressure weight and other standard antenatal care. The monitoring became fortnightly during the third trimester and up to delivery. Serum cyclosporine level was measured in each trimester. She had a spontaneous vaginal delivery of a live baby girl after 36 weeks gestation with a birth weight of 2.4kg and APGAR score of 9 and 10 in 1 and 5 minutes respectively. Problems encountered during the pregnancy include anaemia, mild hypercalcaemia and low birth weight.

Conclusion: This case illustrates the challenges of managing post transplant in our environment and that a successful pregnancy and delivery are possible in post transplant patients of child bearing age in our setting.

INDICATIONS, COMPLICATIONS, AND OUTCOME OF HEPARIN-FREE HAEMODIALYSIS IN AMINU KANO TEACHING HOSPITAL

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Background: Heparin is the drug commonly used to prevent extra corporeal blood clotting during haemodialysis, however in certain situations especially when bleeding is a problem, heparin is used in low dose or sometimes not used at all. The objectives of the study is to review the indications, complications and outcomes in patients who had heparin-free dialysis in our unit.

Method: The case records of all patients who had heparin free dialysis over a 2-year period were traced and relevant information obtained.

The sessions were conducted using intermittent saline infusion. the total of which was added to the filtration goal. Blood flow rate was maintained between 250-300ml/min.

Results: A total of 25 sessions were conducted on 13 patients (eight males and five females) over a two-

year period. Sixteen (16) sessions were due to uraemic pericarditis, seven (7) due to haemorrhagic CVD, and one as a result of bleeding in CRF from obstructive uropathy secondary to ovarian tumour and another one due to uraemia with bleeding diatheses.

Of the twenty-five sessions conducted; twenty-two were successful, presented no TMP or dialysate pressure alarms with no significant clots observed in the dialyser and blood tubings.

Complication encountered include total clots in two (2) patients and severe hypertension during the session in one (1) patient.

Conclusion: Heparin-free haemodialysis can be safely done in our environment and provide safer dialysis in patient populations with risk of bleeding.

PREVALENCE OF RISK FOR CHRONIC KIDNEY DISEASE IN SOUTH EAST NIGERIA

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Introduction: The incidence and prevalence of chronic of kidney disease (CKD) are rising all over the world. In countries CKD is under-recognized and under-treated especially in developing countries. The outcomes associated with CKD are very poor; and the burden of the disease on the individual, community and the nation is huge.

In line with the goal of The National Kidney Foundation initiative of early detection of CKD at the earliest sign of malfunction this screening was designed as a baseline for a larger community screening programme.

Method: A screening programme was carried out in South East Nigeria among women from two urban communities, Nnewi and Enugu. It entailed administering a detailed questionnaire with questions on present and past medical history; and family of hypertension, diabetes mellitus and renal disease. Relevant social history was also taken. Anthropometric data (height, weight, waist and hip circumference) were collected and urine analysis done with dipstick (Combur 10) for proteinuria, glycosuria, haematuria, leucocyturia etc.

Results: In this continuing screening exercise, a total of 99 women from two urban communities were screened (67 women from Enugu and 33 from Nnewi): Then mean age of the women was 49.88 ± 13.05 years with a range of 20-80 years. 58.6% admitted to buying drugs without doctor's prescriptions; of this, 28.3% prescribe drugs for themselves. There was significant family history of hypertension (37.4%) and diabetes mellitus (28.3%) while only 5.1% gave family history of renal disease.

Use of skin lightening/toning creams, herbal supplements, native concoctions, and medicated/mercury containing soaps was found in 23.7%, 28.3%, 31.3% and 24.2% respectively.

The mean systolic and diastolic blood pressures were on the high side being 106.56 ± 16.03 mmHg, 140.00 ± 22.22 mmHg and 89.90 ± 14.59 mmHg respectively. The mean body mass index (BMI) and waist hip ratio. While proteinuria was detected in 129.9% of the population and glycosuria in 6.3%, only one subject had leucocyturia (1.1%) and none had haematuria. On further analysis of proteinuria using multivariate analysis, only systolic blood pressure was significant with multivariate analysis.

Remarkably, 21.2% of the population had hypertension diagnosed during the screening, 32.3% were previously diagnosed and 46.5% did not have hypertension. 8.1% (8 subjects) were previously known to have diabetes mellitus, one patient who was not previously known to have diabetes had glycosuria but her random blood sugar was normal.

Conclusion and Recommendation: This screening has shown that individuals in the study area have high prevalence of the various risk factors associated with CKD. It is hoped that this study will form a fulcrum for an association like ours to highlight the need for such awareness programmes to all stakeholders.

IMPACT OF WEIGHT CHANGE ON ALBUMINURIA IN A GENERAL POPULATION: AN OBSERVATION STUDY

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Background: Albuminuria has been recognised as a feature of obesity and the metabolic syndrome. Obesity, the metabolic syndrome as well as albuminuria are predictors of increasing cardiovascular morbidity and mortality. The impact of weight change in terms of a loss or gain in weight on albuminuria has not been studied in a general population setting. It is the aim of this study to investigate the impact of body weight change (gain or loss) on albuminuria in a cohort of general population.

Methods: 6,894 participants of the PREVEND study with full information on weight parameters were studied from baseline to a mean period of follow-up of 4.2 years for weight change (gain or loss), and its impact on albuminuria, renal function and cardiovascular surrogate risk markers/ factors (BP, total cholesterol, glucose). Participants were categorized into 3 groups based on absolute change in weight from baseline to follow-up: significant weight losers (>10kg reduction in weight), stable (< 10kg gain or loss in weight), significant weight gain (> 10kg increase in weight). Multivariate regression analysis was used to evaluate the relationship of weight change on urine albumin excretion rate (UAE) correction for possible confounders.

Results: At the point of follow-up of 4 years, 101 persons had significant weight loss, 348 had significant weight gain and the remaining were stable. Weight loss associated with significant improvements in BP, glycaemia levels, and lipid profile independent of the use of medications, and these parameters worsens in those who substantially gained weight ($P<0.001$). Similarly, weight loss is significantly associated with a reduction in UAE in an adjusted multivariate model for other factors, including the use of medications ($P<0.001$).

Conclusion: This is the first population-based study to investigate the impact of changes in weight on albuminuria in a setting. We suggest that weight loss independently predicts albuminuria regression even after adjustment for other risk factors and also improves BP, dyslipidaemia, and glycaemia status also potent risk factors for increased urinary albumin excretion.

ARE FIRST DEGREE RELATIVES OF PATIENTS TREATED FOR ESRD AT A GREATER RISK FOR ALBUMINURIA THAN THE GENERAL POPULATION?

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Introduction: Relatives of patients with End-stages Renal Disease (ESRD) are rarely studied for Chronic Kidney Disease (CKD) markers such as albuminuria. Albuminuria is a potent risk factor/marker for CKD and cardiovascular (CVD) morbidity/mortality, yet its burden and determinants have not been fully elucidated in this putatively at-risk population nor compared with that of the general population. This study provides prevalence estimates for albuminuria and its determinants in relatives of patients for ESRD, with comparative analyses of similar populations for albuminuria.

Results: The overall percent prevalence of microalbuminuria was 6.6, with 7.8 for high-normal albuminuria. This compared favourably with a similar representative sample in the Netherlands (PREVEND) but was much lower than that reported in the Kidney Early Evaluation Program (KEEP) in the US. Prevalence of established risk factors; diabetes (4.3%), hypertension (14.7%), and obesity (20.3%) was lower in this study than that in KEEP. The main determinants of albuminuria in our populations were; family history of diabetes (adjusted OR; 1.8, 95% CI; 1.3-2.9), family history of hypertension (adjusted OR 1.9, 95% CI; 1.3-3.2), overweight (adjusted OR; 3.2, 95% CI; 1.8-12.3) and social deprivation (adjusted OR; 2.8, 95% CI; 1.6-3.2).

Conclusion: Microalbuminuria in relative of patients being treated for ESRD is common but similar to rates in a general population. Previously reported higher rates of albuminuria in this population might be related to a preponderance of risk factors rather than a true albuminuria burden due to a familial predisposition.

PATTERN OF ACUTE RENAL FAILURE DUE TO EXOGENOUS NEPHROTOXINS IN ILORIN

Olanrewaju T. O., Adekoya A. O., Chijioko A., Aderibigbe A.

Background: Acute renal failure (ARF) is a frequently encountered clinical condition Worldwide. Majority of the causative factors are largely preventable and potentially reversible if recognized early and promptly treated. There is paucity of data on ARF due to exogenous nephrotoxins like drugs and herbal remedies in our environment. There is strong suspicion that it may be high judging from the way people consume analgesics and herbal preparations for ailments before seeking medical attention. This retrospective study is an attempt to define the magnitude and outcome of ARF due to nephrotoxins in Ilorin.

Methodology: All the adult patients with confirmed ARF that presented to the nephrology unit of University of Ilorin Teaching Hospital within a five year period (January 1998 – December 2002) were studied with specific reference to those due to exogenous nephrotoxins. The study excluded ARF in surgical, obstetrics and pediatrics practices. Analysis of the patients were done by simple proportions with specific reference to age, sex, causative factors, duration of illness, treatment modalities and outcome.

Result: Thirteen cases (7male, 6 females) of nephrotoxic ARF were identified out of 118 (11%) ARF cases seen within the study period. The age range was 19-45 years with a mean of 35 years. Non-steroidal anti-inflammatory drugs (NSAID) were implicated in 10 (77%) cases, herbal preparations in 6 (46%) with one case each of heavy alcohol consumption, insertion of herbal vaginal pessary and consumption of holy green water. Five cases (38.5%) were complicated by septicaemia of which 3 that benefited from haemodialysis survived. All the four cases (100%) that had haemodialysis survived while seven out of nine cases (78%) managed conservatively recovered, which suggest the beneficial effect of intervention therapy. Nine cases (69.2%) were discharged while 2(15.4%) absconded and 2(15.4%) died. The poor prognostic factors identified were poor socio-economic status and septicaemia.

Conclusion: ARF from exogenous nephrotoxins is not an uncommon condition in our environment, although the small and the short duration of the study limit a far reaching conclusion. Awareness programmes that focus on the need to avoid potentially nephrotoxic agents, bad gynaecological and social habits will positively influence the prevalence and outcome of this type of renal failure.

UTILITY OF PREDICTED CREATININE CLEARANCE USING MDRD FORMULA COMPARED WITH OTHER PREDICTIVE FORMULAE IN NIGERIAN PATIENTS

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There has been a new predictive formula generated during the study of Modification of Diet in Renal Disease (MDRD STUDY) to predict the creatinine clearance (CrCl) in the management of chronic renal failure (CRF) patients. The new formula (MDRD Formula) was found to be superior to existing predictive

formulae in all races including black Americans. We had previously published a study evaluating and comparing five predictive formulae and their applicability in Nigerian CRF patients and normal. The existing data from this work was reevaluated and compared using MDRD formula and previous five predictive formulae in the published study to determine whether MDRD formula was superior. The five predictive formulae are:

1. Jelliffe (1973)
2. Mawer et al (1972)
3. Cockcroft & Gault (1976)
4. Hull et al (1981)
5. Gate G F (1985)
6. and new formula MDRD (1999)

The five predictive formulae and current MDRD formula gave high (good) correlation between the measured and predicted creatinine clearance in disease state and in controls (normal individuals). Correlation Coefficient, (r) ranged between 0.908, 0.968 and Coefficient of Determination, (r^2), ranged between 0.826, 0.936. There was also good correlation between the measured and predicted CrCl in healthy state, though the r and r^2 values were weaker (0.718 0.957) and (0.516 0.916). Specifically, MDRD formula was only superior to Jelliffe and Gates and not so to Cockcroft and Gault, Hull, and Mawer predictive equations in disease state (CRF) MDRD formula yielded $r=0.929$ and $r^2=0.862$ and the values for Cockcroft & Gault, Hull and Mawer ranged between 0.961 0.972. It was concluded that MDRD formula, though useful and applicable was not superior to existing formulae and cannot replace them and that Cockcroft & Gault equation is still the best predictive formula in our setting (homogenous black race) because of the ease of its recall and high correlation coefficient and coefficient of determination in both health and disease states.

PERCEPTION AND CONSUMPTION PATTERNS OF HOSPITAL MENU AMONG HOSPITALIZED RENAL PATIENTS AT OAUTHC, ILE-IFE

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Background: The link between diet, health, illness and longevity is well documented in literature. Dietary therapy has not only become an essential adjunct of care but the bedrock of treatment in many chronic illnesses including CKD. It is the above consideration that informs the introduction and inculcation of meal service as integral part of care in hospitals. But how well are hospital menu consumed is an issue that has not been given the desired attention in this environment. Yet the acclaimed health benefits inherent in dietary management can only be harnessed when patients consume menu served them in the hospital. This study therefore assessed hospitalized renal patients perception and consumption patterns of hospital menu in OAUTHC, Ile-Ife.

Method: 100 patients with renal impairment selected by convenience sampling formed the study population and data collection was done with a structured interview schedule. Data collected were analyzed descriptive and inferential statistical techniques.

Results: The study revealed that majority (62%) of the patients had an unsatisfactory perception of hospital menu with 49% recording a generally low/inadequate consumption. Findings established a positive relationship between patients perception of hospital menu and their consumption patterns ($X^2 = 18.45$; $P < 0.01$). No relationship was however found between religion and patients consumption of hospital menu ($X^2=3.47$; $P = 0.48$) and between patients' financial status and perception of hospital menu ($X^2=5.62$; $P=0.22$). Lastly, the study recorded a positive association between respondents' literacy level and their perception of hospital menu ($X^2=5.62$; $P<0.05$).

Conclusion: In view of the generally inadequate patients' consumption patterns of hospital menu as shown by this study, patients need not only be educated on the goals of hospital menu but also be actively involved in planning their own diet, if the goal of better health through improved adherence to therapeutic regimen is to be attained.

RELATIONSHIP OF KIDNEY VOLUME TO MEASURED GFR, CALCULATED CREATININE CLEARANCE AND OTHER PARAMETERS IN CHRONIC RENAL FAILURE PATIENTS.

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Kidney length has been traditionally taken and used as a predictor of chronic renal failure. Kidney volume rather than kidney length is now being emphasized by several authors as true predictor of kidney size in health and disease state. Kidney volume is favoured because it correlates with body surface area (BSA) whereas kidney length correlates with height, the kidney length decreases with age as it becomes thicker and wider whereas kidney volume is stable with relatively little change. Since Kidney volume can be assumed to be a predictor of kidney mass on remaining surviving nephrons in the chronic renal failure patients, we theorized that the kidney volume should reflect the functional capacity of the kidney as determined by the means of endogenous creatinine clearance (eCrCI) and urea clearance (UrCI), predicted creatinine clearance (pCrCI) using Cockcroft and Gault equation and MDRD formula.

The use of pCrCI using Cockcroft and Gault equation has been found by our group and others to be a good predictor of true GFR in both health and disease state and also MDRD and Hull et al formulae were found to be applicable in predicting true GFR.

We evaluated the relationship of kidney volume as determined ultrasonographically using the formula of Dinkel et al for ellipsoid organ as a reflection of functional capacity of the kidney in established CRF. The volume generated from this formula was regressed against measured CrCI, predicted CrCI using Cockcroft & Gault, Hull and MDRD equations in 31 Nigerian CRF patients.

The results showed no correlation between the volumes determined sonographically and measured CrCI, predicted creatinine clearance generated by Cockcroft & Gault, Hull and MDRD (P value = 0.322). However, there was strong correlation between the measured CrCI and various predicted CrCI as evidenced by correlation coefficient ranging between 0.817-0.834 and coefficient of determination ranged between 0.667-0.696 (P value=0.0000)

Also Body Surface Area (BSA) and height were not discrete parameters for the length of the kidneys and kidney volume in established CRF as there were no correlation between these parameters and bipodal diameters of the kidney (BPD) and kidney volumes.

Kidney volume determined by Dinkel et al formula has not been found in this study to predict the glomerular filtration rate and therefore cannot be used as a measure of GFR in established CRF patients in study population. Also in established CRF the existing relationships between the BSA and kidney volume and height and bipodal diameter of the kidney (BPD) are altered.

IMMUNOGLOBULIN A NEPHROPATHY COMPLICATING ULCERATIVE COLITIS
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Renal Section, New Mexico Veterans Affairs Health Care System (VAHCS), Albuquerque, New Mexico, USA, Department of Medicine, University of New Mexico (UNM) School of Medicine, Albuquerque, Department of Medicine, Faculty of Medical Sciences, University of Jos, Plateau State, Nigeria; General Medicine Section, New Mexico VAHCS and Department of Medicine, UNM School of Medicine, Pathology Section, New Mexico VAHCS and Department of Pathology, UNM and School of Medicine.

Background: Ulcerative colitis is rarely associated with immunoglobulin. A nephropathy (IgAN). The development of IgA nephropathy complicates further the clinical course of patients with ulcerative colitis. **Methodology:** Case review of 72-year old man with a 30-year history of ulcerative colitis requiring colectomy and modest renal insufficiency secondary to complications of nephrolithiasis and renal artery stenosis developed glomerular hematuria, proteinuria and progressive renal failure. Percutaneous kidney biopsy revealed IgAN with extensive glomerular and interstitial sclerotic changes.

Results: After resection of chronically infected ileo-rectal pouch, renal function improved, while hematuria and proteinuria gradually disappeared without specific treatment of the IgAN.

Conclusion: The manifestations of IgAN complicating ulcerative colitis can be improved with effective treatment of the bowel disease even when there are extensive sclerotic changes in the kidneys.

OBESITY AND CHRONIC KIDNEY DISEASE IN NIGERIAN HYPERTENSIVES: IS IT MORE THAN A FAT CHANCE?

I.B. Bosan and S. I. Kwaifa
Department of Medicine, A. B. U. T. H., Zaria.

Introduction: Obesity is not listed among the potential risk factors for susceptibility to and initiation/progression of Chronic Kidney Disease (CKD). Hypertension and Diabetes Mellitus are established predictors of CKD and leading factors of initiation and progression of CKD. Obesity, hypertension and Diabetes Mellitus are important components of the metabolic syndrome also known as syndrome X or insulin resistance syndrome. Is obesity also an independent risk factor for CKD or just a chance comorbid condition?

Method: Hypertensive patients attending the follow-up clinics at A. B. U. T. H. Zaria were screened for markers of CKD using dipstick proteinuria and Cockcroft Gault equation estimated GFR. Analysis was done using the Statistical Package for Social Sciences (SPSS). Patients with Diabetes Mellitus, Hypertensive heart failure, obstructive uropathy, Urinary tract infections, systemic infections and other multisystemic diseases such as Systemic Lupus Erythematosus were excluded from analysis. Age and sex matched hypertensive without markers of CKD were selected as control.

Results: 50 subjects and 30 controls were analyzed. Subjects with proteinuria had mean BMI 32 and those with estimated GFR <60ml/min/1.73m² had mean GR 33.25 as against the controls that had a mean BMI 25. Bivariate correlation and partial correlation coefficients showed significant correlation between BMI and estimated GFR and BMI and Fasting blood glucose (FBG). The correlation between BMI and estimated GFR remained significant even when controlled for FBG, Systolic BP, Diastolic BP and mean arterial pressure.

All our patients were already on treatment for their hypertension, no consideration was made for the duration of the disease and no information about BMI at baseline. Notwithstanding the limitations, there is clear correlation between BMI and the presence of markers of CKD in our hypertensives. We have identified obesity as a strong and potentially modifiable risk factor associated with CKD in our hypertensives.

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This an observational study and not possible to determine whether obesity independently initiate or enhance progression of CKD. We recommended a long-term study to examine this relationship more closely.

PATTERN OF NON COMMUNICABLE DISEASES AMONGST MEDICAL ADMISSIONS IN PORT HARCOURT, NIGERIA.

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Background: Global and regional estimates show that non-communicable diseases in addition to that of communicable disease imposes a dual disease burden with increasing morbidity and mortality. Consequently assessment of the impact of non-communicable disease and efforts to reduce their burden in the developing countries are very important. The study was carried out to determine the pattern of non-communicable diseases in the Medical Wards of the University of Port-Harcourt Teaching Hospital, (UPTH) over four consecutive years (June 2000-June 2004)

Materials and Method: The study was retrospective and data were obtained from the medical registers in the medical wards and the records departments of the University of Port Harcourt. Teaching Hospital Medical admissions due to non – communicable diseases were carefully selected and analyzed.

Results: There were 1853 cases of various non-communicable diseases out of a total medical admission of 3294 constituting 56.2% of total medical admission, while communicable diseases encountered for 43.8%.

Disease in of the cardiovascular, endocrine and renal systems were the most commonly identified non-communicable diseases constituting 35.7%, 18.5% and 16.8% respectively.

There was a steady increase in the proportion of patients with non-communicable diseases over the four-year period. Chronic renal failure (55.7%) and Nephrotic syndrome (24.5%) were the most common renal indications for admission.

Conclusion: Non-communicable diseases are a major cause of morbidity in Port Harcourt and contribute significantly to the double burden of disease.

Renal disease constitute a significant proportion of non-communicable disease seen in Port Harcourt. There is still need for action to reduce the burden of non-communicable diseases in Nigeria.

ESTIMATED GLOMERULAR FILTRATION RATE IN HEALTHY ADULTS IN NORTH- ERN NIGERIA.

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Kano.*

Background: Assessment of glomerular filtration rate (GFR) is crucial in the diagnosis of renal disease, management of chronic renal failure and management of drug therapy during which timely clinical decisions are critical. Estimation of GFR with inulin, which is the gold standard, is not routinely available due to inconvenience to patients who must receive two infusions of the substance during the test. The widely used creatinine clearance, which requires 24-hours urine collection, is cumbersome, insensitive, unreliable and difficult for infants and patients with urological problems.

Objectives: This study was undertaken to establish reference values of estimated GFR (eGFR) in apparently healthy subjects using Cockcroft-Gault formular, which requires only age, sex, weight and serum creatinine.

Methodology: Blood samples (5.10ml) were collected from 127 subjects aged 18-53 years and made up of 103 males and 24 females. Seventy-three were blood donors at the Donor Clinic of AKTH and 54 were medical students of Zaria (50) and Kano (4). Serum creatinine was measured with routine procedure and eGFR calculated using the above formula.

Results: The mean and 95% intervals in all the subjects were 121.1 and 43.7 – 198.5 ml/min. The values for males (124.1, 49.1 – 199.2 ml/min) were significantly higher ($P < 0.05$) than in females (107.9, 24.2 – 191.7 ml/min).

Conclusion: Estimated GFR (eGFR) in apparently healthy subjects in the study population using Cockcroft-Gault formular.

These values are in agreement with GFR databased on inulin published elsewhere. In view of its simplicity and low cost institution of eGFR for routine use would be a significant step in the management of patients with renal disease in our setting.

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