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A CASE REPORT OF COVID 19 COMPLICATED WITH SEVERE ACUTE KIDNEY INJURY REQUIRING DIALYSIS

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Background: Though first reported in China, the first case of the novel COVID 19 in Nigeria was in February, 2020, after which over 165,000 cases, comprising of asymptomatic presentations to severe multi systemic disease and death have been reported. The organ that is mostly affected is the lungs but almost every organ including the kidneys, can have varying spectrum of affectation.

Case Report: We report a 63year old Nigerian female trader, who had just completed a six month course of chemotherapy for stage III breast cancer in January, 2021. Her renal function tests were normal post treatment, she however, presented in February 2021 with fever of one week, cough and difficulty in breathing of four days. Physical examination revealed a woman in respiratory distress, febrile (temperature of 38^0C), tachypneioc with SPO_2 of 92%. Her chest X-ray showed bilateral infiltrates, full blood count showed severe leucocytosis, and thrombocytosis. The nasopharyngeal swap was positive for SARS-CoV-2. She had antibiotics, intranasal oxygen, intravenous fluid and other supportive measures. The patient had a rapid decline in her kidney function necessitating four sessions of haemodialysis. She had a steady but full recovery of her kidney function after twelve weeks of follow up. The aim of this report is to add to the pool of evidence that acute kidney injury and failure can complicate SARS-CoV-2 infection.

Conclusion: SARS-CoV-2 can be complicated with Acute Kidney Injury, that may require renal replacement therapy .The prognosis appears good if prompt treatment is instituted.

ACUTE KIDNEY INJURY

ACUTE KIDNEY INJURY IN THE IMMEDIATE PERIPARTUM PERIOD- A STUDY OF THE PREVALENCE, PATTERN AND PREDICTORS

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Background: Acute kidney injury (AKI) is a major challenge in the immediate peripartum period and associates with high foeto-maternal morbidity and mortality. This study determined the frequency, pattern and predictors of AKI in the peripartum period.

Methods: This was a prospective observational study of 120 women presenting in labour at a teaching hospital in Lagos. Inclusion criteria were age at least 18 years and active labour, while participants were followed till 48 hours post-delivery. Patients with renal impairment were excluded from the study. Serum

creatinine was determined at labour ward admission as well as 12, 24 and 48 hours while urine output was measured every 6 hours up to 48 hours post-delivery. For the purposes of the study, the immediate peripartum period was defined as the period from established labour to 48 hours post-delivery and AKI was defined using the acute kidney injury network criteria. Analysis was done using the statistical package for social sciences software version 26. Summary data are presented as means, medians and percentages and are compared using the student's t-test and chi-square test as appropriate. Logistic regression analysis was employed in identifying the predictors of AKI. Level of statistical significance was set at a p-value less than 0.05.

Results: The mean age of the study participants was 31.02 $\pm$5 years with 44.2% being primipara. AKI occurred in 16 (13.3%) of the study participants. The frequency of AKI increased progressively from 3.3% at 12-hours to 9.2% at 24-hours and 13.3% at 48-hours post-delivery. Among participants who developed AKI, 10 (62.5%) had preeclampsia, six (37.5%) had sepsis and four (25%) had post-partum haemorrhage.

Participants who developed AKI had significantly higher mean systolic (144.0 $\pm$ 28.5 vs 127.8 $\pm$ 23.2; p = 0.01) and diastolic (92.1 $\pm$ 21.2 vs 81.0 $\pm$ 16.1; p = 0.04) blood pressures as well as a higher frequency of a history of hypertension prior to index pregnancy (44.4% vs 10.8%; p = 0.02), elevated BP at admission (24.3% vs 8.4%; p = 0.04) and pre-eclampsia (62.5% vs 6.9%; p = 0.002). After correcting for a history of pre-pregnancy hypertension and admitting systolic and diastolic blood pressure, pre-eclampsia (OR = 5.7, 95% CI = 1.2 – 27.3; p = 0.03) was associated with the development of AKI.

Conclusion: AKI occurs commonly in the peripartum period. Preeclampsia is associated with an increased risk of developing AKI.

ACUTE TUBULAR NECROSIS FOLLOWING MULTIPLE BEE STINGS.

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Introduction: Although acute kidney injury (AKI) due to multiple bee stings is well established in the literature, it is still a rare entity with complex pathophysiologic mechanisms. Mass envenomation from bee stings can trigger a cascade of immunological reactions leading to hypotension, intravascular hemolysis and rhabdomyolysis, in addition to its direct cytotoxic effects on the renal tubules. We hereby present a case of a 50-year-old known type 2 diabetes mellitus patient with prior normal renal function who developed severe AKI requiring renal replacement therapy following aggressive multiple bee stings.

Case Report: A 50 year old man presented to our emergency unit a few hours (4hrs) following multiple stings from more than 1000 bees. He was drowsy, restless, had facial swelling with multiple erythematous stings on the face and trunk. His baseline vitals signs were: blood pressure of 140/90mmHg, tachycardic with PR of 104bpm, RR 20cpm. Twenty four hours post admission he was noticed to be anuric despite receiving 3 liters of intravenous normal saline with elevated urea (21.9 mmol) and creatinine (602µmol/L). A repeat serum creatinine 24 hours post initial test showed worsening of creatinine level (844 µmol/L). He was subsequently commenced on intermittent haemodialysis in addition to other treatment modality (intravenous hydrocortisone, adrenaline, sc soluble insulin and loop diuretic).

Urinalysis showed protein ++, blood +++, numerous hyaline casts.

Had a kidney biopsy that showed acute tubular necrosis of both ischemic and toxic features.

Outcome and follow up: After the seventh session of haemodialysis, his urine output gradually increased to 2500mLs/24h on day 23 and subsequently went into polyuric with urine output ranging between 5-8L/24hr. Duration of hospital stay was 31 days. His serum creatinine level was 122 µmol/L seventh week post initial event.

Conclusion: Aggressive attack from bees should be treated as a medical emergency and prompt management should be instituted to prevent AKI. However, when AKI ensues dialysis can be instituted early to reduce morbidity and mortality

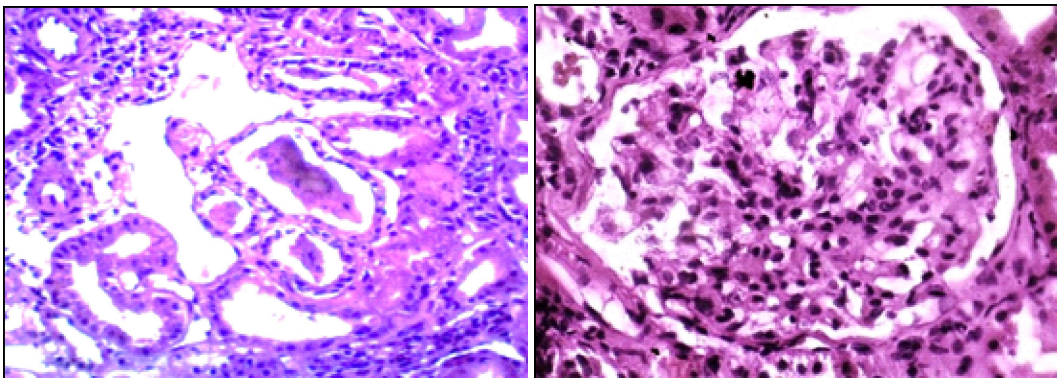

Figure 1a & b: Shows dilated tubules with granular, red cell and epithelial casts in oedematous interstitium and b: shows glomerulus with expanded mesangium but patent tufts and peripheral glomerular basement membrane.

AKI IN A PATIENT WITH COVID 19 AND A UNILATERAL SHRUNKEN KIDNEY: A CASE REPORT

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Introduction: The COVID-19 pandemic was originally thought to have a predilection for the lungs; however, several reports of kidneys involvement and other organ involvements have led to an improved characterisation of the disease. Acute kidney injury is the commonest renal presentation in patients with COVID-19, and the aetiology is often multifactorial. The incidence of AKI in patients with COVID-19 ranges from 0.5% to 35% and is associated with higher severity of illness and increased mortality.

Method: A summary of the case records of the patient and a review of relevant literature.

Results: The index patient is a 42-year-old Nigerian male who presented at the emergency room during the peak of the COVID outbreak with complaints of high-grade intermittent fever, dry unproductive cough and difficulty in breathing of three days duration; with associated history of protracted vomiting and generalized body weakness. There was no history of recent travels and he was not aware of exposure to a COVID-19 case. There was a previous history of gunshot injury to his left thigh for which he had vascular surgery further complicated by deep vein thrombosis of the left great saphenous, popliteal and femoral vein, eight and six years ago respectively. He was placed on prophylactic aspirin which he had complied with until presentation.

A reverse transcriptase polymerase chain reaction (RT-PCR) for SARS-COV2 was positive and he was treated for COVID-19 pneumonia. During the course of the treatment as an inpatient, he developed AKI

with uraemia, hyponatremia, hyperkalemia, acidosis and anuria and had three sessions of haemodialysis with subsequent conservative care. Renal ultrasound scan done following nephrology consultation showed a shrunken right kidney and an essentially normal sized left kidney. His renal function returned to near normal and he is being followed up in nephrology clinic.

Conclusion: The essence of this case report is to highlight a successfully managed case of COVID-19 associated AKI in a low-resource setting. Additionally, to emphasise that AKI in patients with COVID-19 is often multifactorial and evaluation of every case should be thorough and individualized.

TROPICAL NEPHROLOGY

COMPARISON OF URINE KIDNEY INJURY MOLECULE-1 IN PATIENTS WITH SICKLE CELL ANAEMIA WITH AND WITHOUT NEPHROPATHY

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Background: Routinely employed markers of renal dysfunction are unreliable in individuals with sickle cell anaemia (SCA), however available evidence suggest that urine KIM-1 may detect early stages of sickle cell nephropathy (SCN) and as such, further evaluation in the SCA population is warranted.

Methods: This was a cross-sectional study involving 90 participants with SCA aged six years and above attending the sickle cell clinics of a Teaching Hospital and 45 age-matched, healthy controls. Inclusion criteria for the SCA arm were being in steady state and consenting to participate while in the control arm, individuals had haemoglobin type AA, no evidence of inter current illness and no evidence of nephropathy. Recruitment of SCA patients was by stratified random sampling into five cohorts (those without nephropathy, those with hyposthenuria, microalbuminuria, macroalbuminuria and reduced GFR respectively). The control population was matched for age and gender with those in the SCA arm. Venous blood and freshly voided urine were obtained from participants for determination of serum creatinine, cystatin C, urine albumin/creatinine ratio and KIM-1. Data are summarized as means and standard deviation, medians and interquartile ranges and percentages as appropriate. Similarly, comparisons were done using the student's t-test, analysis of variance, Man-Whitney U test, Kruskal-Wallis test and chi-square test as appropriate.

Results: Urine KIM-1 was significantly higher among individuals with SCA than the control population [0.63 (0.3 – 1.1) vs 0.43 (0.1 – 0.8); p = 0.004]. Furthermore, while KIM-1 did not differ significantly between the control population and participants with SCA who had no evidence of nephropathy [0.43ng/mL (0.1 – 0.8) vs 0.40ng/mL (0.2 – 0.7); p = 0.40], it was significantly higher among those with SCA who had nephropathy [0.77ng/mL (0.4 – 1.5) vs0.40ng/mL (0.2 – 0.7); p = 0.001].

Among participants with SCA, there was a progressive and significant increase in urine KIM-1 levels from that in participants with no evidence of nephropathy to that in participants with reduced GFR [0.4ng/mL (0.2 – 0.7) vs 0.5ng/mL (0.2 – 1.0) vs 0.8ng/mL (0.5 – 1.3) vs0.9ng/mL (0.3 – 1.9) vs 0.8ng/mL (0.4 – 1.2); p = 0.004].

Conclusion: The findings of this study supports the hypothesis that urine KIM-1 may be a novel and important biomarker of nephropathy in individuals with SCA.

ACUTE KIDNEY INJURY

INCIDENCE, PATTERNS AND PREDICTORS OF ACUTE KIDNEY INJURY AND IN-HOSPITAL MORTALITY AMONG PATIENTS WITH THE SYSTEMIC INFLAMMATORY RESPONSE SYNDROME AND NORMAL BASELINE KIDNEY FUNCTION ADMITTED TO THE EMERGENCY DEPARTMENT

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Background: Systemic inflammatory response syndrome (SIRS) occurs in up to 35% of patients admitted to the emergency department (ED). Acute kidney injury (AKI) frequently complicates the clinical course of SIRS and early diagnosis may prevent AKI-related complications, including mortality. This study aimed to determine the incidence, patterns and predictors of AKI and in-hospital mortality in patients with SIRS at the ED.

Methods: This was a prospective observational study of 126 patients aged 18 years and above presenting with the SIRS at the ED of a Teaching Hospital. Pregnant patients and patients with evidence of renal impairment at presentation were excluded. AKI was defined according to the Kidney Disease Improving Global Outcomes (KDIGO) criteria. Creatinine samples were obtained at admission, 12 hours, 24 hours, 48 hours, 72 hours and day 7 after admission. The primary end-point of the study was the development of AKI and the secondary end-point was in-hospital mortality. Data were summarized as means and standard deviation, medians and interquartile ranges and percentages as appropriate. Similarly, comparisons were done using the Student's t-test, Mann-Whitney U test, and Chi-square test as appropriate. The predictors of AKI and in-hospital mortality were determined using Cox's proportional hazards analysis.

Results: Overall, AKI occurred in 63 (50%) of the study participants with an incidence of 80.3 episodes per 1000 patient-days with 38 (60.3%) having stage 1, 19 (30.2%) stage 2 and six (9.5%) stage 3 disease. The frequency of AKI increased progressively from 36.5% at 12 hours to 50% at 48 hours post-admission into the ED. There were no additional cases of AKI after 48 hours. Overall, the mortality rate among the study participants was 31%, with mortality among those who developed AKI not differing significantly from that among those who did not (40% vs 24%; p =0.059). The median baseline serum urea and creatinine were significantly higher in the patients who developed AKI compared to those who did not but neither of them independently predicted the development of AKI. A quick sequential organ failure assessment (qSOFA) score $\geq$2 and respiratory rate >28 cycles/min independently predicted overall mortality (OR = 4.63; 95% CI = 1.93-11.07; p < 0.001)as well as mortality in patients with AKI (OR = 2.69; 95% CI = 1.11-6.53; p = 0.029).

Conclusion: The rates of both AKI and in-hospital mortality were high among this population of patients with SIRS. AqSOFA score $\geq$ 2 and respiratory rate > 28 cycles/min were independent predictors of mortality in the patient population.

KIDNEY INVOLVEMENT IN COVID-19 INFECTION: A SINGLE CENTRE EXPERIENCE

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Background: COVID-19 pandemic has affected 160.8 million people globally with 3.3million deaths. Although the kidney is one of the key organs affected by this virus, data on kidney involvement in COVID-19 infection is still paltry in Africa and Nigeria in particular. To determine the prevalence of kidney involvement in COVID-19 infection.

Methods: Available medical records of confirmed COVID-19 cases admitted into University of Nigeria Teaching Hospital (UNTH) Enugu's, infectious disease unit (IDU) were reviewed from IDU's inception to 30/5/2021. Acute kidney injury (AKI) was defined as increase in serum creatinine e"26.5µmol/l within 48hours or >1.5 rise in 7days. Patients with single serum creatinine/urea that showed azotemia with blood urea nitrogen/creatinine ratio >20 were labelled "probable AKI". Patients without serum creatinine/urea values were labelled "unknown AKI". Without these, AKI is said to be absent.

Results: Within the review period, 132 confirmed-COVID-19 cases were admitted into UNTH IDU. However, 95 medical records (males = 69 (72.6%), females = 26 (27.4%) were available for analysis. Patients were aged 15-95 (mean age = 60.68±16.87 (males = 60.23±16.75, females = 61.73±17.49, p=0.713) years. Females were more likely to present earlier (mean time to presentation: males = 8.09±4.19 days, females = 6.08±3.62, p=0.033). Nineteen (20%) patients died, 69(72.6%) were discharged home, 2(2.1%) left against medical advice while 5 patients had undocumented departure method. Presenting symptoms included: fever (85.7%), cough (77.9%), breathlessness (74%) and weakness (26%). In fig.1, 31 patients (32.6%) had AKI. Nine (64.3%) of 14/50 (45.2%) AKI patients who required dialysis were dialyzed all at UNTH renal unit. The clinical characteristics, comorbidities and admission outcome of AKI and No AKI patients are shown in tables 1-3.

Conclusion: Among patients with confirmed COVID-19 infection who required in-patient care, prevalence of kidney involvement is high. These patients are more likely to have pre-existing comorbidities and higher mortality.

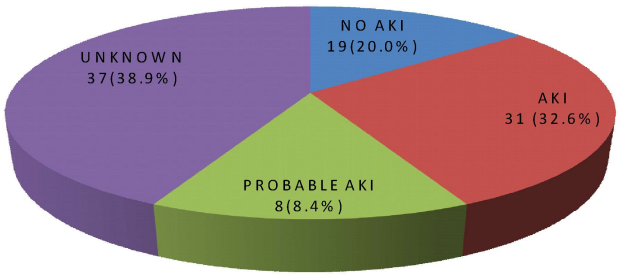

Fig. 1: *Kidney involvement in COVID- 19 infection*

Table 1: Clinical characteristics of AKI and No AKI patients

	NO AKI(n=19)	AKI(n=31)	p-VALUE
SEX			
Males	11	24	0.144
Females	8	7	
Mean age(years)	62.63 ± 20.7	63.03 ± 17.8	0.695
Duration of symptoms prior to presentation	5.8 ± 3.3	7.7 ± 4.0	0.194
Mean SBP (mmHg)	131.1 ± 24.7	140.3 ± 32.0	0.149
Mean DBP (mmHg)	79.5 ± 16.8	79.4 ± 20.4	0.170
SYMPTOMS			
Fever	19	27	0.103
Cough	17	23	0.190
SOB	14	23	0.968
Headache	3	2	0.355
Sore throat	2	0	0.140
Nausea/vomiting	2	0	0.158
Fluid retention	2	14	0.013
Weakness	8	10	0.481
Anorexia	3	2	0.355
Anosmia	1	2	1.000
Reduced urine output	0	14	<0.001
Altered sensorium	2	9	0.170
Seizures	0	1	1.000
Abdominal pain	1	0	0.405
Diarrhea	0	1	1.000

Table 2: Risk factors/comorbidities of AKI

COMORBIDITY	NO AKI(n=19)	AKI (n=31)	p-VALUE
Hypertension	7	20	0.057
Diabetes	4	16	**0.041**
BOO	5	6	0.564
Heart failure	3	2	1.000
Morbid obesity	0	1	1.000
Stroke	0	1	0.355
RTA with polytrauma	0	1	1.000

Table 3: Outcome of infectious disease unit admission

OUTCOME	NO AKI (n=19)	AKI (n=31)	TOTAL (n=7)	p-VALUE
Death	0	6	6	0.094
Discharged	14	18	32	
Unknown	4	7	11	
Left against medical advice	1	0	1	

THE EFFECTIVENESS OF THE USE OF RECONSTITUTED PERITONEAL DIALYSIS FLUID IN THE MANAGEMENT OF CHILDREN WITH AKI, IN ENUGU, SOUTHEASTERN NIGERIA

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Background: Peritoneal dialysis is the preferred mode of renal replacement therapy in children and has been found to be an effective treatment modality in those with AKI. Availability and cost of commercially prepared dialysate in resource poor nations, like ours, limits the access to this mode of treatment. Hence, it becomes pertinent to ascertain the effectiveness of locally prepared bedside peritoneal dialysis fluid, reconstituted from available intravenous solutions and medications in our environment where such challenges exist.

Methods: This was a retrospective case folder review of cases with confirmed diagnosis of Acute Kidney Injury (AKI) who had peritoneal dialysis using bedside prepared dialysate. Case records of cases of AKI seen over a 3 year period, between 2018 and 2020 were reviewed and data on bio demographics, techniques, indications, complications and outcome was extracted. Data was imputed into computer software and analyzed using appropriate tests.

Results: A total of 36 patients had acute peritoneal dialysis using locally prepared dialysate within the period under review. There were 20 males and 16 females giving M: F ratio of 1.25:1. Median age of the children was 8.5 (IQR 3; 12) months. The commonest diagnosis associated with AKI was septicemia and hemolytic uremic syndrome seen in 30.6% and 19.4% of patients respectively. The commonest indications for the PD were uremic encephalopathy and severe metabolic acidosis (58.3%). Mean duration of symptoms was 3.114 (SD 1.795) while the median number of sessions of dialysis was 28 (IQR 18;35). The mean eGFR before the dialysis was 6.06±2.87 while after the dialysis was 24.44±15.71. The outcome was generally good and mean time to recovery was 2.857(SD,0.81)days. There was neither mortality nor case of peritonitis.

Conclusion: Peritoneal dialysis with locally reconstituted fluid is a plausible option for patients in developing countries like ours and would increase access as well as reduce mortality from AKI in children living in LMIC. More centers in Africa should explore this option and build up the capacity for PD amongst general practitioners in peripheral centers.

ACUTE KIDNEY INJURY

31-YEAR-OLD WOMAN RAPID DECLINE IN RENAL FUNCTION RATE FOLLOWING REPEATED PREGNANCIES IN A PATIENT WITH CHRONIC KIDNEY DISEASE

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Mrs B.A, a 31-year-old housewife, a known hypertensive patient diagnosed 3 years prior to presentation was referred to the renal clinic on account of severely elevated blood pressure. She had a recent spontaneous termination of pregnancy at 20 weeks gestational age.

Examination revealed pallor and elevated blood pressure (BP) [170/120mmHg]. Urinalysis revealed 3+ proteinuria and serum creatinine was 227ìmol/L. An assessment of secondary hypertension possibly due to chronic glomerulonephritis

She expressed a strong desire to get pregnant as soon as possible and despite counsel to delay future pregnancy, she had two additional pregnancies over the next 30 months, the first resulted in a spontaneous abortion at 16 weeks EGA and the second, emergency CS at 29 weeks EGA. Over the same period, there was an initial improvement in eGFR followed a precipitous drop resulting in ESRD. Following the third pregnancy, she presented with severely elevated blood pressure, azothemia and acute pulmonary oedema on account of which she had 3 sessions of haemodialysis and was discharged home.

She was seen at the nephrology clinic two weeks later at which time she had not dialyzed since discharge due to severe financial constraints. She presented at the emergency department of the hospital a few days later with acute pulmonary edema which was unresponsive to high dose diuretic therapy. Her relatives were unable to raise sufficient funds for the urgent HD required and she died while awaiting HD.

Message: This report highlights the potential adverse effects of pregnancy on renal function and renal function on pregnancy in patients with CKD. The fact that the patient insisted on getting pregnant despite counsel otherwise may also reflect societal pressure women face to bare children when they are married.

33-YEAR-OLD MAN WITH CHRONIC KIDNEY DISEASE PRESENTING WITH LIFE-THREATENING ANAEMIA, METABOLIC ACIDOSIS AND HYPERKALAEMIA

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A.D is a 33-year oldman who presented to the emergency department with complaints of recurrent bilateral leg swelling of five months, generalized body weakness and worsening breathlessness of two months duration.There was a history of reduction in urine output and frothiness of urine, two-pillow orthopnoea, paroxysmal nocturnal dyspnoea, dry cough, palpitations, intermittent upper abdominal pain and hiccups.

Clinical examination revealed a conscious but lethargic young man in obvious respiratory distress, who was markedly pale and had bilateral pitting pedal oedema up to the knees. He also had tachycardia of 124bpm, tachypnoea of 32cpm with an oxygen saturation of 89% on room air, epigastric tenderness as well as

asterixis. Investigations revealed severe renal impairment with associated life-threatening anaemia (haemoglobin concentration of 1.4g/dL), metabolic acidosis (serum bicarbonate < 10mmol/L) and hyperkalemia (serum potassium of 7.1mmol/l).

He was admitted and commenced on IV 10% calcium gluconate 10mg stat, IV 50% Dextrose water 50ml (1 in 1 dilution) + soluble insulin 8 units and IVF 5% Dextrose saline 500ml + 4 units of soluble insulin + 75 mmol of 8.4% NaHCO3 to run over 24hours. He subsequently had 3 sessions of haemodialysis via a femoral catheter, was transfused with 7 units of packed cell, commenced on anti-hypertensive medications, intravenous iron and erythropoietin, and discharged home after 8 days to continue follow up on an outpatient basis.

Message: This case highlights both the challenges faced when patients with CKD present late to the Nephrologist and how prompt and appropriate intervention in these patients can result in favourable outcomes.

ACUTE KIDNEY INJURY

ANAEMIA IN INCIDENT CHRONIC KIDNEY DISEASE PATIENTS: A STUDY OF THE PREVALENCE, PATTERN AND PREDICTORS

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Background: Although the cut-off values for the definition of anaemia in patients with CKD were extrapolated from values in the general population, few studies in Nigeria have studied burden of anaemia in CKD patients using the WHO cut-offs for haemoglobin concentration.

Methods: This was a retrospective study involving 273 incident CKD patients attending the nephrology out-patient clinics of a Teaching Hospital in Lagos. Study inclusion criteria were age 18 years or older and a diagnosis of CKD. For the purposes of this study, CKD was defined according to the Kidney Disease: Improving Global Outcomes (KDIGO) criteria, while anaemia was defined according to the World Health Organization (WHO) criteria. Glomerular filtration rate (GFR) was estimated from serum creatinine using the CKD-EPI study equation. Data are summarized as means and standard deviations, medians and interquartile ranges or percentages as appropriate. Similarly, comparisons done using student's t-test, Kruskal-Wallis test, one way ANOVA test andchi-square test as appropriate. Predictors of anaemia were determined using logistic regression analysis.

Results: The median age of the study population was 56.0 (44.0 – 66.0) while their median eGFR was 27.9ml/min/1.73m2 (range: 1.2 – 145.2). Overall, anaemia was present in 76.2% of the study population. AKI was more common among male than female participant (70.3% vs 82.2%; p = 0.02). The prevalence of anaemia increased progressively from 44.8% in patients with stage 1 CKD to 93.6% in patient with stage 5D disease (p < 0.001).Compared with those without anaemia, anaemic patients had significantly lower median BMI [26.2 (23.4 – 30.4)vs27.8 (25.0 – 31.4); p = 0.03], and eGFR [19.9 (8.0 – 46.5)vs62.0 (32.0 – 89.6); p < 0.001];significantly higher median systolic blood pressure [150 (140 – 170) vs 140 (124 – 168); p = 0.01], serum creatinine [298.0 (141.6 – 640.0)] vs 115.0 (79.0 – 187.0); p < 0.001] and serum urea [12.0 (7.8 – 20.8) vs 5.4 (4.5 -8.7); p < 0.001]; as well as a significantly higher proportion of them having proteinuria [87.3% vs 72.8%; p = 0.01]. Among the study participants. eGFR less than 60ml/min/1.73m^2(OR = 4.2,

95% CI = 2.1 – 8.6; p < 0.001) and serum urea above 10mmol/L (OR = 2.6, 95% CI = 0.5 – 13.7; p = 0.03) were the factors independently associated with the presence of anaemia.

Conclusion: Anaemia was common among study participants being high even among patients with stage 1 disease and its frequency increased as eGFR declined. The degree of renal impairment was the most important predictor of the presence of anaemia.

THE ASSOCIATION BETWEEN ANTHROPOMETRIC MARKERS OF OBESITY AND KIDNEY DISEASE IN RURAL NIGERIANS

Background: Obesity is a risk factor for kidney disease (KD). This adverse relationship between KD and obesity is of public health concern because in recent decades, the prevalence of obesity and KD has increased rapidly in Nigeria and other developing countries.

This study sought to determine the relationship between anthropometric measures of body fat and kidney function in adults residing in a rural Nigerian community.

Methods: This was a cross-sectional study. Using multi-stage cluster random sampling technique, normal adult residents (aged e"18 years) in Ukpor, Anambra State, Nigeria, were recruited for study. Anthropometric variables measured for each participant were weight, height, waist circumference and hip circumference. The body fat percentage was estimated using bio-impedance. The following were calculated from above measurements: body mass index (BMI), conicity index, waist-hip ratio, waist-height ratio, abdominal volume ratio and estimated glomerular filtration rate (eGFR). Data obtained was analyzed with the EPI INFO ver 7.2.2.16.

Results: A total of 391 adults, comprising 142(36.3%) males and 249(63.7%) females with median age of 60 years and age range of 18 - 92 years, were studied. While 186(47.6%) were hypertensive, 85(21.7%) were diabetic; 213(54.5%) had increased waist circumference; 232(59.3%) increased waist-hip ratio and 256(65.5%) increased waist-height ratio. Excess generalized adiposity determined by BMI >25kg/m^2 was found in 202(51.7%) participants giving a prevalence of 51.7%; visceral fat excess as determined from waist circumference, waist-hip ratio, and waist-height ratio was 54.5%, 59.3% and 65.5% respectively.

The table shows the differences in mean eGFR between participants with normal body fat and excess body fat as determined by different anthropometric indices. Increased waist circumference, increased waist-hip ratio and increased waist-height ratio were each significantly associated with reduced eGFR ($p<0.05$).

Conclusion: The prevalence of generalized and central obesity is increased in this rural Nigerian population. Anthropometric markers of central obesity, unlike BMI, were significantly associated with low eGFR. These findings should be adopted in public health programs in order to tackle obesity associated CKD in Nigerians.

Comparison of mean eGFR by body fat indices in the study population

Variable	eGFR, mean ± SD	T-test	p-value
BMI		-1.949	0.052
< 25Kg/m	99.0 ± 24.2		
≥ 25Kg/m	94.5 ± 22.1		
Waist Circumference		-3.405	**<0.001***
Normal	101.0 ± 24.3		
Increased	93.1 ± 21.6		
Waist Hip Ratio		-2.105	**0.036***
Normal	99.6 ± 25.6		
Increased	94.6 ± 21.2		
Waist Height Ratio		-3.269	**0.001***
Normal	101.9 ± 26.2		
Increased	93.9 ± 21.0		
Body Fat Percentage		-5.2491	<**0.001***
Normal	105.9 ± 25.5		
Increased	92.3 ± 20.7		

BULLOUS SYSTEMIC LUPUS WITH NEPHRITIS IN A NIGERIAN GIRL

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Introduction: Systemic Lupus erythematosus is a chronic, multisystem, inflammatory, autoimmune disorder and tends to run a more severe course in children. There are few reports of SLE and lupus nephritis in Nigerian children.

Case Report: An 11yr old Nigerian girl, presented with body rash of 10 weeks, recurrent fever of 4 weeks and swelling of hands and legs of 1 week duration. She weighed 36.4kg and her height was 140 cm. She was pale, had bilateral pitting leg oedema, widespread skin rash on the face, trunk, upper limbs and upper thighs-tense blisters, multiple ulcers, crusted lesions and areas of scaring. Her blood pressure was 120/70mmHg. Initial laboratory results were FBC- HCT-17.2%, WBC-10,200/mm^3, Neutrophils 57%, Lymphocytes 33.3%, Platelets 474,0000/mm^3; ESR- 113mm/hr, Urinalysis – Proteinuria 3+, Blood 4+, and Leuc 1+; initial serum electrolytes urea and creatinine showed Na+- 132, K+- 4.8 Cl-99, HCO3-18 mmol/l, Serum Urea 50 and Cr 1.2mg/dl. Management was hampered by funds. Diagnosis of juvenile bullous systemic lupus erythematosus with lupus nephritis was considered. Samples were obtained for serum ANA and Anti-DSDNA, but results were delayed for about two weeks. She was started empirically on i.v methyl prednisolone 20 mg/kg/day daily for 3 days which was followed by oral prednisolone, IV Cyclophosphamide 750mg/m2, and p.o hydroxychloroquine 5mg/kg/day. Her ANA was 1:5120 (ref- negative 1:80), while her Anti DNA was > 200 (ref- positive > 18). She was initially stable but had flare of SLE about 8 days after commencement of immunosupressives with development of fresh bullous skin lesions and worsening serum creatinine - 4.9 mg/dl. She was started on p.o Mycophenolate Mofetil and was planned for haemodialysis. She however became hypotensive and succumbed to the illness before dialysis could be commenced.

Conclusion: Improved access to laboratory diagnosis and immunosuppressives may contribute to better outcomes for SLE with nephritis in Nigerian children.

PREVALENCE OF CARDIOVASCULAR RISK FACTORS AMONG PATIENTS WITH CHRONIC KIDNEY DISEASE.

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Background: Cardiovascular disease is the major cause of morbidity and early mortality in chronic kidney disease patients. It is estimated recently that kidney disease contributes to more deaths than the four main non-communicable diseases (NCDs). Cardiovascular disease mortality rate in CKD patients is about 10-20 times greater compared to the general population. Despite regular haemodialysis and improvement in dialysis technology, mortality rate of end stage renal disease was above 50% at 1 year and more than half are related to cardiovascular disease. CKD is regarded as a cardiovascular risk equivalent in most current guidelines. The study assessed the prevalence of some traditional and non-traditional risk factors among CKD patients attending Usmanu Danfodiyo University Teaching Hospital Sokoto.

Methods: The study was cross-sectional in design. A total of 80 CKD patients and 40 healthy control subjects were enrolled. Socio-demographic, clinical and laboratory data were obtained using a structured proforma. Clinical and laboratory data were collected using a structured proforma. Data was analysed using SPSS version 23.

Results: The prevalence of hypertension was 73.7% while diabetes was 17.5% among CKD patients. The prevalence of anaemia, obesity and proteinuria were 95%, 6.2% and 86.2%. There was no statistically significant difference in the level HDL cholesterol between patients and control while hypertriglyceridemia was more prevalent among the control subjects compared to CKD patients. Some of the non-traditional risk factors studied include parathyroid hormone levels, high sensitivity c-reactive protein and left ventricular hypertrophy which were all significantly higher in the CKD group compared to control.

Conclusion: There is a significantly higher prevalence of cardiovascular risk factors among CKD patients compared to age and gender matched controls. Early identification and treatment of these risk factors will aid in reducing morbidity and mortality.

CKD-MBD, DOES IT WORSEN WITH PROGRESSION OF CKD?

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Background: Chronic Kidney Disease - Mineral and Bone Disorder (CKD-MBD), has been recognized as an important complication of CKD, yet, its diagnosis and management are often a challenge, especially to clinicians in developing countries. It is characterized by alterations in serum levels of calcium, phosphorus, vitamin D, parathyroid hormone, Fibroblast Growth Factor-23 (FGF-23) among other biomarkers, bone disease and increased vascular calcification.

CKD-MBD has been consistently associated with excess increase in morbidity and mortality in CKD patients as it has been associated in many series with, poor quality of life and progression to end-stage kidney disease, amongst others. This study set out to look at some of the biomarkers of CKD-MBD and to see if CKD-MBD worsens with progression of CKD from stages 3 to 5.

Methods: Ninety (90) consenting adults in stages 3 to 5 CKD (30 in stage 3, 30 in stage 4 and 30 in stage 5 CKD) were recruited into the study from the renal unit of Obafemi Awolowo University Teaching Hospital Complex (OAUTHC), Ile-Ife, after obtaining an ethical clearance. A structured interviewer administered questionnaire was used to collect data; and blood samples were obtained for various biochemical parameters including iPTH, serum creatinine, calcium and inorganic phosphate, using kits and Hospital laboratories. Data collected were analyzed using the Statistical Package for Social Sciences version 20.

Results: The diagnosis of CKD-MBD was made using the presence of any of hypocalcaemia, hyperphosphataemia or secondary hyperparathyroidism according to KDIGO 2017 guidelines. The prevalence of CKD-MBD in the patients was 85.6% and the trend was noted to increase as CKD progressed through stages 3 to 5 (66.7%, 90% and 100% for stages 3, 4 and 5 CKD, respectively; P=0.001).

Conclusion: This study shows that CKD-MBD is highly prevalent in stages 3 to 5 patients and that the syndrome increases with worsening kidney function;therefore, a thorough search for evidence of CKD-MBD in CKD patients, and managing it aggressively may help in mitigating the excess morbidity and mortality associated with this syndrome.

EFFECT OF ERYTHROPOIETIN, IRON THERAPY, BLOOD TRANSFUSION AND FREQUENCY OF DIALYSIS ON HEMATOCRIT OF PATIENTS RECEIVING NON-STANDARD MAINTENANCE HEMODIALYSIS THERAPY

Background: Anaemia in Chronic Kidney Disease (CKD) is multifactorial. Some of these factors include reduced production of erythropoietin by the kidneys, reduced absorption of iron in the gut and uraemic environment. These has led to increased need for blood transfusion until the introduction of Erythropoiesis stimulating agents and intravenous iron. AIM: The aim of the study is to observe the effect of Erythropoietin (EPO), Iron therapy, blood transfusion, and frequency of dialysis on hematocrit of Chronic Kidney Disease (CKD) patients on non-standard maintenance hemodialysis therapy.

Method: This is a retrospective study involving 21 CKD patients on maintenance hemodialysis (HD). Data were extracted from their files at LASUTH Hemodialysis Unit which included biodata, aetiology of CKD, frequency of HD, duration on HD, monthly dose of EPO and Iron therapy and hematocrit level on commencement of Maintenance hemodialysis and the latest hematocrit at the time of collating data. Patients were stratified into three groups based on the above parameters and their final hematocrit level. Fisher's exact test was used to assess for differences between the groups.

Result: There was no significant difference between groups in terms of improvement in anaemia status when the different frequencies of dialysis, length of time on dialysis, doses of EPO & doses of iron therapy and number of blood transfusion. However, there was a strong negative correlation between the doses of EPO and number of blood transfusion.

Conclusion: Although no statistically significant difference was observed with the frequencies of dialysis, length of time on dialysis, doses of EPO & doses of iron therapy and number of blood transfusion, small sample size, blood losses during cannulation, disconnection, and other driving factors for anaemia in the dialysis patients are probable reasons for the observed results.

FGF-23: IS THIS PHOSPHATONIN USEFUL IN PREDICTING CKD-MBD?

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Background: Chronic Kidney disease – mineral bone disorder (CKD-MBD) is a known devastating sequelae of Chronic kidney disease (CKD) which is difficult to diagnose, as the gold standard for diagnosis still remains bone biopsy for histomorphometry. A concerted search for non-invasive biomarkers to aid diagnosis has led to the unearthing of a phosphatonin called FGF-23. This agent has been shown to be elevated in CKD and has been associated with adverse cardiovascular events, however its diagnostic value is yet to be appreciated. This study aimed at looking for a predictive value for FGF-23 in patients with stages 3 to 5 CKD.

Method: One hundred and three (103) consenting adults with stages 3 to 5 CKD and thirty-five (35) apparently normal controls were recruited from the renal unit of Obafemi Awolowo University Teaching Hospital, Complex, Ile-Ife, Osun state and data was collected using a well-structured interviewer administered questionnaire, after obtaining ethical clearance. Blood samples were collected and serum phosphate, corrected calcium, intact parathyroid hormone and fibroblast growth factor – 23 levels were assayed. The data was then analyzed using SPSS 20.

Results: CKD-MBD was defined as the presence of any of hypocalcaemia, hyperphosphataemia or secondary hyperparathyroidism (KDIGO 2017 guidelines), while FGF-23 was categorized into high (values higher than 2 standard deviations plus the mean FGF-23 of the normal control) and normal (values less than this). The prevalence of FGF-23 was 86.4% in all the patients, with a sensitivity of 77.5% and specificity of 35.7%. The positive predictive value (PPV) was 88.5% while the negative predictive value was as low as 20%. In stage 3 CKD, sensitivity was 85.7% while specificity was 36.4%; in stage 4 CKD, it was 77.8% and 33.3% for sensitivity and specificity, respectively, and finally for stage 5 CKD, sensitivity was 70.6%. The prevalence of CKD-MBD increased from 71.8% to 90% and then 100% from stages 3 to 5 CKD.

Conclusion: In conclusion, elevated FGF-23 was highly prevalent in CKD-MBD. It was also noted to be sensitive but not specific as a diagnostic tool for CKD-MBD, though it had a relatively high PPV and low NPV. This trend was noted at each stage of CKD (stages 3 – 5).These results may suggest that there is a role yet for FGF-23 in the diagnosis of CKD-MBD.

PREDICTORS OF FUNCTIONALIRON DEFICIENCY IN NON-DIALYSIS CHRONIC KIDNEY DISEASE PATIENTS IN A SEMI-URBAN NIGERIAN COMMUNITY.

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Background: Iron deficiency (which could be functional or absolute) is becoming a more important cause of anaemia in chronic kidney disease patients not yet on dialysis. Iron deficiency worsens aschronic kidney disease progresses. In the setting of functional iron deficiency, iron is made inaccessible or unavailable for erythropoiesis despite adequate iron stores and this is attributed to underlying inflammation and/or infection often seen in chronic kidney disease patients.

The objective of the present study was to ascertain the predictors of functional iron deficiency in non-dialysis chronic kidney disease patients in a semi-urban Nigerian community.

Methods: One hundred and seventy non-dialysis dependent chronic kidney disease patients with functional iron deficiency (defined as serum ferritin greater than 100ng/mL and TSAT less than 20%) were recruited. Using logistic regression, the relationship between independent variables (socioeconomic status, age, sex, aetiology of chronic kidney disease, serum c-reactive protein levels) and functional iron deficiency was determined.

Results: Elevated levels of serum c-reactive protein (OR=2.53: 95% CI=1.25-5.11, p=0.02) and presence of human immunodeficiency virus associated nephropathy (OR=2.31: 95% CI=1.04-5.72, p=0.02) were statistically significant predictors of functional iron deficiency in non-dialysis CKD patients.

Conclusion: Elevated c-reactive protein levels and human immunodeficiciency virus associated nephropathy are strongly associated with functional iron deficiency in chronic kidney disease patients not yet on dialysis. The clinical implication could be that chronic kidney disease patients with elevated c-reactive protein levels and/or human immunodeficiency virus associated nephropathy as an aetiology of chronic kidney disease, may have more functional iron deficiency than their counterparts.

PREVALENCE OF KIDNEY IMPAIRMENT AND ITS ASSOCIATED FACTORS AMONG HIV-INFECTED ANTIRETROVIRAL TREATMENT - NAÏVE ADULT PATIENTS IN BAYELSA STATE, NIGER DELTA, NIGERIA

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Background: The burden of the human immunodeficiency virus (HIV) infection is highest in sub-Saharan Africa (SSA) including Nigeria. Determination of baseline kidney function is crucial in management. The study aimed to determine the prevalence of kidney impairment (KI) and associated factors among antiretroviral treatment (ART) – naïve HIV patients in Niger Delta area of Nigeria.

Methodology: A retrospective study was carried out in the Niger Delta University Teaching Hospital (NDUTH) involving ART- naïve HIV infected persons presenting in clinic between years 2011 – 2020. Information retrieved from the case notes included socio-demographics, clinical and laboratory parameters. The Chronic Kidney Disease (CKD) Epidemiology (EPI) Collaboration formula was used to compute the estimated glomerular filtration rate (eGFR) while creatinine clearance (CrCl) was estimated with the Cockcroft Gault equation. KI was defined as eGFR< 60 mls/min.

Results: Complete data was retrieved for 210 individuals (mean age 40.07 $\pm$ 9.63 yrs) with females accounting for 59.0% of cases. The prevalence of KI was 13.8% while up to59.5 % had CrCl below 90mls/min. KI showed significant association with age >45 yearsp=0.009), married status(p=0.001),presence of co-morbidity(p = 0.01) and high HIV RNA load(p= 0.03). However, only age was independently associated with KI {AOR 3.432{1.231- 9.569)}.

Conclusion: KI was prevalent in the patients with age < 45 years being its sole determinant. However, 'being married', having co-morbidities and high viral loads also showed significant association. There is need for assessment of renal function in HIV- infected persons before initiation of ART.

PREVALENCE OF TRADITIONAL RISK FACTORS OF CHRONIC KIDNEY DISEASE IN AN AGRARIAN COMMUNITY IN EDO STATE, NIGERIA: REPORT OF A HEALTH SCREENING SURVEY

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Background: Chronic Kidney Disease **(**CKD) is a public health problem with negative impact on affected individuals and communities worldwide. It is more cost-effective to prevent CKD through identifying and mitigating risk factors than treating end stage renal disease (ESRD). The study aimed to determine the prevalence of risk factors of CKD in anagrarian community in Nigeria.

Methodology: This was a cross-sectional study of adults who partook in a health screening exercise in South Ibie Kingdom, Edo State, Nigeria. Study duration was from February to May 2015. Interviewer-administered questionnaires were used to obtain data from respondents. Anthropometric and blood pressure measurements were taken. Urinalysis and serum creatinine measurement were done. Data was analyzed with IBM SPSS 20.0.

Results: One hundred and sixty three respondents (70 males, 93 females) completed the study. Thirty three (20.2%) had previous diagnosis of hypertension, 6.1 % diabetes (DM) and 1.2 % kidney disease. A family history of hypertension, DM and kidney disease were found in 16.0%, 11.7% and 1.8% respectively. The prevalence of hypertension, hyperglycemia and generalized obesity were 24.5%, 2.5% and 35.0% respectively. While 19.6% had proteinuria, 2.7% hematuria, 22.2% participants had eGFR <90 mls/min with a significant correlation of eGFR with age ($p < 0.001$), body mass index ($p = 0.029$), Systolic blood pressure ($p < 0.001$) and diastolic blood pressure ($p < 0.001$).

Conclusion: The prevalence of risk factors for CKD was high. To help reduce its scourge, there is need for regular screening of communities for risk factors followed by prompt intervention.

PREVALENCE, CORRELATES AND PREDICTORS OF CAROTID INTIMA MEDIA THICKNESS AMONG CHRONIC KIDNEY DISEASE

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Introduction: Chronic kidney disease (CKD) is a major public health burden with global increase in prevalence, morbidity and mortality. Cardiovascular disease is the major cause of morbidity and early mortality in chronic kidney disease patients. Carotid intima media thickness (CIMT) correlates with future cardiovascular and cerebrovascular events and measurement of CIMT has been suggested as a suitable, valuable and evidence-based tool to predict and evaluate cardiovascular risk. The study assessed the prevalence, correlates and predictors of CIMT among CKD patients attending Usmanu Danfodiyo University Teaching Hospital Sokoto.

Methods: The study was cross-sectional in design. A total of 80 CKD patients and 80 healthy control subjects were enrolled. Socio-demographic, clinical and laboratory data were obtained using a structured proforma. CIMT was measured using 7.5MHZ linear probe in B mode regime and dynamic range set at

60db. An average of six measurements; 3 from each side of the carotid was taken as the final CIMT. Clinical and laboratory data were collected using a structured proforma. Data was analysed using SPSS version 23.

Results: The prevalence increased CIMT among CKD patients was 63.7% and a statistically significant difference in mean CIMT between the CKD group 0.96±0.15mm and control 0.5±0.15mm, p-value<0.001. The mean CIMT increased across the stage of CKD with a statistically significant difference, p-value<0.01. There was no statistically significant difference in CIMT across aetiology of CKD. A positive correlation existed between increased CIMT measurements with age, serum creatinine, intact parathyroid hormone and hsCRP but a strong negative correlation was observed between CIMT and eGFR. Using multiple linear regression, the strongest predictor of CIMT was found to be hsCRP.

Conclusion: There is a significantly higher CIMT measurements in CKD patients compared to age and gender matched controls. This is associated with increase in cardiovascular risk in CKD patients. Thus, CIMT can be used for predicting and evaluating for cardiovascular risk in CKD patients in our setting and also-ran suggested for other hospitals as a useful non-invasive tool for early intervention.

RENAL CATASTROPHE WITH HERBAL INGESTION CASE SERIES OF NEPHROTOXICITY WITHAVERRHOA BILIMBI ("IRUMBAN PULI")

Faswal Pichan

Introduction: Plant toxins are known to cause Acute Kidney Injury in tropical countries. We report 3 cases of Acute Oxalate Nephropathy following ingestion of Averrhoa bilimbi fruit juice which contribute to nephrotoxicity.

Case Study: Case 1: A 45- year-old female presented to emergency department with B/L pedal edema facial puffiness and abdominal distension of 3-day duration. K.systemic hypertension and dyslipidemia with poor drug compliance. Diet history reveals consumption of 200 ml of undiluted juice made from bunch of lrumban pull 3 days back presuming that it would correct her cholesterol levels. Urine deposits shows plenty of oxalate crystals. Labs are significant for serum creatinine - 7 mg/d1. Kidneys were supported by HD and discharged on day 5 of hospital admission with serum creatinine 1.5 mg/di and adequate urine output.
Case 2: A 50- year-old male presented to the emergency department with generalized edema of 3day duration. History of decreased urine output for the past 5days. Not a kick>. DM or HT. Recently diagnosed with dyslipidemia. Diet history reveals consumption of around 100 ml of lrumban pull juice twice daily for 2 days. Lab reveals serum creatinine 6.5 mg/c11. Patient underwent 4 sessions of hemodialysis and was kept on oral prednisolone in view of interstitial nephritis. At the time of discharge patient urine output is adequate with serum creatinine 1.2 mg/di and counselled about the adverse reactions of herbal ingestions
Case 3: A 65-year-old female presented to emergency department with c/o breathing difficulty for the past one day associated with B/L pedal edema, facial puffiness and decreased urine output for the past 3 days. Recently diagnosed with dyslipidemia and was not on any medications. History further reveals that she consumed 150 ml of undiluted lrumban puli juice twice 5 days back. Urine deposits shows plenty of oxalate crystals. Lab

In all the cases. USG Abdomen shows no renal calculi and no hydronephrosis and with good renal cortex and medullary differentiation erumban pull juice concentrate has a significant role in the pathogenesis of AKI with Acute Oxalate Nephropathy. Emergency physicians should be aware of the toxic effects if lrumban puli. Early dialysis will result in good outcome and good prognosis.

To create awareness about lrumban Puli among the healthcare professional especially to ED personnel.

Emphasis on the public awareness about the dangerous consequences of the plant toxins when consumed as a self-treatment.

We should be aware about the plant toxins in and around our locality to have high index of suspicion in focused history taking to make quick diagnosis and good management which may result in best outcomes.

CHRONIC KIDNEY DISEASE

THE PREVALENCE OF OBESITY AMONG PATIENTS WITH PRE-DIALYIS, NON-DIABETIC, CHRONIC KIDNEY DISEASE AT THE LAGOS UNIVERSITY TEACHING HOSPITAL

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Background: Obesity is traditionally defined using a body mass index (BMI) $\geq$30kg/m^2. However, other measures of defining obesity are increasingly being employed. This study determined the prevalence of obesity and compared characteristics of pre-dialysis CKD patients classified as obese and non-obese using BMI and percentage body fat (%BF).

Methods: This was a post-hoc analysis of data from the "Effect of Nutritional Status on Renal Outcomes at One Year in Pre-Dialysis Chronic Kidney Disease Patients" study. Data of 104 patients with stages 3 and 4 CKD were analyzed. Inclusion criteria were age 18 years or older and GFR of 15 – 59ml/min/1.73m^2 while patients with co-morbidities known to directly affect nutritional status were excluded. Weight and height were measured and BMI determined. Skinfold thickness (SFT) from four regions of the body (triceps, biceps, subscapular and supra-iliac regions) were summed and from this, percentage body fat was calculated using the Durnin and Womersley equation. Serum albumin, urea, creatinine, total cholesterol, C-reactive protein and haemoglobin concentration were also determined. GFR was estimated from serum creatinine using the four-variable MDRD study equation. Obesity was defined as BMI>30kg/m^2 or BF%>25% in males and >30% in females.

Results: Obesity was present in 26% and 57%of participants using BMI and BF% respectively. Ninety-six (96%) of the participants categorized as obese using BMI were similarly categorized using BF%. Participants categorized as obese using BMI had higher mean haemoglobin concentration (12.7±1.7 vs 11.1±2.6; p = 0.001) and lower median serum urea [37.8(31.2, 48.1) vs 48.0(37.2, 65.7); p = 0.03] and creatinine [1.6 (1.3, 2.1) vs 1.9 (1.6, 2.8); p < 0.01] levels compared to those categorized as non-obese. Participants categorized as obese using BF% also had higher mean hemoglobin (12.0±2.0 vs 10.8±3.0; p = 0.01) and lower medial serum creatinine [1.8 (1.5, 2.5) vs 2.0 (1.7, 3.0); p = 0.02)] concentrations than those categorized as non-obese, however, they also had higher median total cholesterol levels (171.5±39.3 vs 146.8±51.2; p <0.01).

Conclusion: Obesity is common in patients with pre-dialysis CKD. The use of BF % measured with SFT obesity may detect more individuals with excess fat compared to the use of BMI. Further studies are necessary to determine the clinical implications of these findings.

CLINCOPATHOLOGICAL PROFILE OF NEPHROTIC PATIENTS AT AMINU KANO TEACHING HOSPITAL, KANO, NIGERIA

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Background: Nephrotic syndrome is a major manifestation of glomerulonephritis which is a leading cause of kidney disease in sub-Saharan Africa. Renal biopsy is an important diagnostic tool needed for the management of these patients as it allows for proper diagnosis and institution of appropriate treatment. To evaluate the clinicopathological profile of nephrotic syndrome patients who had a renal biopsy in our center.

Methods: This is a retrospective review of patients who presented with features of nephrotic syndrome between January 1st 2018 to January 1st 2020 and who had percutaneuos renal biopsy done and tissues obtained (subjected to light microscopy and immunflourescence) at the nephrology clinic, AKTH, Kano.

Records of all patients with nephrotic syndrome who presented within the study period were used to generate clinical, laboratory and histopathological reports of tissues obtained on kidney biopsy.

Results: A total of 37 patients with nephrotic syndrome that had kidney biopsy were studied with 29 (78.38%) being males. The mean age was 24.84 ± 9.67 years. Symptoms ranged from body swelling (64.4%), passage of frothy urine (21.6%) to epistaxis, suprapubic pain each with 2.7%. The most common urinary findings were proteinuria (91.4%) and hematuria (64.4%). Minimal change disease was the most common histologic finding (40.5%), followed by Focal Segmental glomerulosclerosis and membranous nephropathy with 18.9% and 10.8% respectively. Membranoproliferative glomerulonephritis was seen in 5.4%. Others were chronic pyelonephritis, Lupus nephritis, post –infectious glomerolunephritis and severe glomerulosclerosis each with 1%. The median creatinine value was 68umol/l.

Conclusion: MCD was the most occurring histologic type in patients with nephrotic syndrome in this study.

CLOPIDOGREL-INDUCED THROMBOTIC THROMBOCYTOPENIC PURPURA: A CASE REPORT

Introduction: Thrombotic Thrombocytopenic Purpura (TTP) is a close differential of uremic encephalopathy and should be suspected when the patient does not regain full consciousness after hemodialysis; the classic pentad of TTP may be absent at presentation and only present later in the course of the illness; clopidogrel is a cardio-protective anti platelet drug used in CKD patients who may be prone to dyspepsia. However it's potential to cause TTP should be recognized and considered in AKI patients previously on clopidogrel.

Case Report: In December 2020, a 48 year old woman, known hypertensive of 18 years who was also diagnosed with CKD V A_2 2° hypertensive nephropathy 2 years earlier but she has been non-dialysis dependent (baseline eGFR – 14ml/min), presented through the emergency with breathlessness, and worsening bilateral leg swelling of 2 weeks duration. These were associated with easy fatigability, persistent hiccups, daytime drowsiness, irrational speech, vomiting of recently ingested food, and anorexia. Leg swelling was worse in the afternoons but better in the morning and was also associated with early morning facial puffiness, and oliguria.

She had been transfused with 3 units of whole blood in the preceding week and her regular medications were: ramipril, hydrochlorothiazide, amlodipine, clopidogrel, Lasix, allopurinol and calcium carbonate.

On examination, she was drowsy, pale, anicteric, acyanosed with ecchymoses at sites of venipuncture on the forearm and bilateral pitting pedal edema up to the knees. Temperature-36.9°C; Pulse rate-80 bpm, Blood pressure-180/100mmHg, Respiratory rate-20c/m. Apex beat was displaced laterally. Her heart sounds were S4, S1 & S2. Her lungs were clear. Neurological examination did not reveal any lateralizing signs. Her admitting investigations are shown in Table 1.

Na	**K**	**Cl**	**HCO3**	**Urea**	**Creatinine**
104 mmol/L	6.3 mmol/L	70 mmol/L	14 mmol/L	22.7 mmol/L	1028 mcmol/L
Hct	**RBS**		**RVS**	**HbsAg**	**Anti-HCV**
27%	134 mg/dL		Negative	Non-reactive	Non-reactive

Table 1: Available investigation results at admission – serum electrolytes, urea and creatinine; Hct - Hematocrit; RBS – random blood sugar; RVS – retroviral screening; HbsAg – Hepatitis B surface antigen; Anti-HCV – Hepatitis C virus antibodies.

A diagnosis of hypertensive nephropathy complicated by uremic encephalopathy and uremic gastritis was made and she had 2 sessions of hemodialysis over a 3 day period. She was also continued on her usual medications, in addition to intravenous omeprazole.

On the 4th day of admission, she became febrile (Temperature-38.7°C) whereas her body temperature in the previous 3 days ranged from 36.4 – 36.7°C. Despite the hemodialysis sessions, her mental status kept deteriorating even though her SEUCr results showed improving azotemia (Table 2). RBS that day was 77 mg/dL. On examination, she was unconscious with a GCS of 8/15 (EOR-4, BVR-2, BMR-2), pale, anicteric, acyanosed, well hydrated and widespread purpura and ecchymoses on all limbs and trunk even in sites with no venipuncture. Pulse rate-108 bpm, Blood pressure-158/100mmHg, Respiratory rate-24c/m. Fluid input/ output in the preceding 24 hours was 800ml/1000ml.

Her diagnosis was changed to Thrombotic Thrombocytopenic Purpura possibly due to Clopidogrel. Clopidogrel was discontinued. Peripheral blood film showed microangiopathic hemolysis with hypochromic erythrocytes, burr cells, microspherocytesand fragmented red blood cells; no malaria was seen on thin blood film. Direct and indirect Coombs test were non-reactive. Her full blood count was significant for thrombocytopenia (100 X 10^9 platelets/L)

Table 2: SEUCr and full blood count on the 4th day of admission

Na	**K**	**Cl**	**HCO3**	**Urea**	**Creatinine**
133 mmol/L	4.0 mmol/L	95 mmol/L	26 mmol/L	15.4 mmol/L	356 mcmol/L
PCV	WBC	Neutrophil (%)	Lymphocyte (%)	Platelets	
27%	4.9	62	30	100	

Fever broke the next day (37.2°C) after clopidogrel was stopped; she also became conscious though with some confusion. Two days after clopidogrel was stopped, she regained full consciousness and was able to take food orally. This clinical improvement coincided with resolution of thrombocytopenia (162 X 10^9 platelets/ L) and microangiopathic hemolysis even though azotemia was worsening (Serum urea – 18.8 mmol/L, creatinine – 828 mcmol/L).

She was discharged after 18 days on admission with a raised baseline serum creatinine of H" 800 mcmol/L. She is currently in an incremental maintenance hemodialysis program.

Discussion: Thrombotic Thrombocytopenic Purpura (TTP) is a variant of thrombotic microangiopathy characterized by thrombocytopenia, microangiopathic hemolytic anemia (MAHA), microvascular wall thickening and thrombotic occlusive lesions in the kidneys and brain. It may be idiopathic (due to mutations in ADAMTS13 gene) or secondary to autoimmune diseases, malignancies, HIV or drugs.

Clopidogrelis an anti-platelet drug which is commonly prescribed in CKD patients to reduce the risk of cardiovascular death and stroke, especially in persons prone to dyspepsia. It has rarely been reported to induce TTP in the global literature and has not been reported from Nigeria.

TTP presents with a classic pentad which facilitates diagnosis: thrombocytopenia, microangiopathic hemolytic anemia, fever, cerebral impairment and kidney failure. However all these features may not be present or, as in the index case, some may present late in the acute illness. Kidney failure, neurologic impairment and anemia preceded the onset of fever and purpura by weeks. This mimicked uremic encephalopathy but our suspicion was aroused when her mental status did not improve after dialysis even though biochemical azotemia was on a downward trend. After ruling out other causes like dialysis dysequilibrum syndrome and other intradialysis complications, the presence of new clinical signs made us consider TTP.

A review of 13 cases of clopidogrel induced TTP in the United States of America over a 20 year period by Zakarija et al observed that in most cases, whereas the kidney injury tends to be severe, thrombocytopenia and MAHA tend to be mild. This pattern is consistent with the presentation of the index patient. That the patient had CKD is likely to have contributed to the severity of the kidney injury.

The overall survival rate of TTP has been reported to be 67%.Early recognition and treatment of TTP is crucial in order to improve outcomes. Discontinuation of clopidogrel in this case was associated with rapid resolution of the fever and improvement in mental status. Unfortunately, it propelled her into end stage kidney disease.

Conclusion: We have reported a case of TTP in a Nigerian CKD patient who was previously on clopidogrel. The features of TTP resolved after clopidogrel was withdrawn. TTP is a mimic of uremic encephalopathy. Clinicians should have a high index of suspicion for TTP when treating patients with suspected uremic encephalopathy, especially if the encephalopathy responds poorly to repeated hemodialysis. Furthermore, the possibility of clopidogrel induced TTP should be borne in mind when evaluating AKI patients who are on clopidogrel.

NEPHROTIC SYNDROME HERALDING SCLERODERMA

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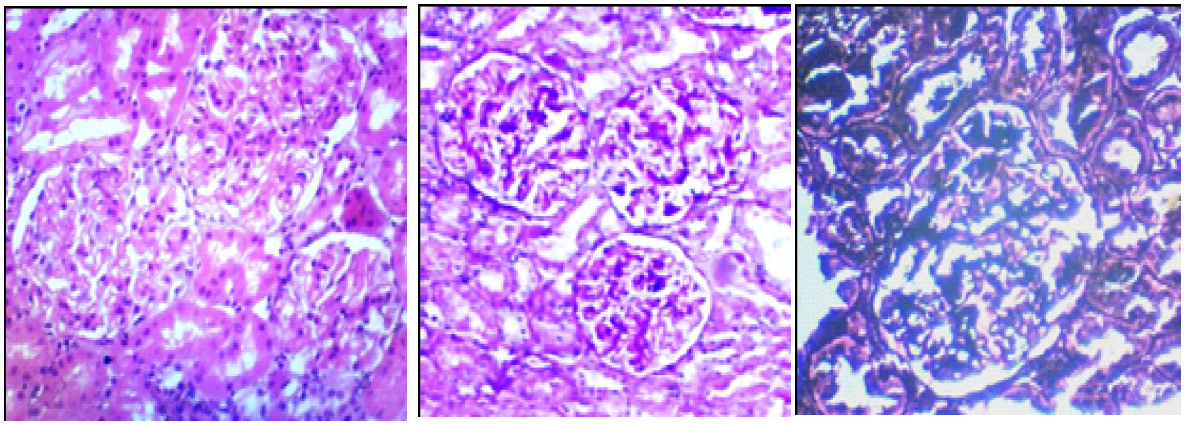
Background: Renal involvement in Scleroderma is usually rare. In most cases Scleroderma precedes the renal disease. The finding of Nephrotic syndrome in Scleroderma is most often and complication of drug management or amyloidosis. Typical renal complication of Scleroderma is arterial hypertension with or without proteinuria, not full pledged Nephrotic syndrome. We present a patient who presented with Nephrotic syndrome, but after remission manifested with overt features of Scleroderma.

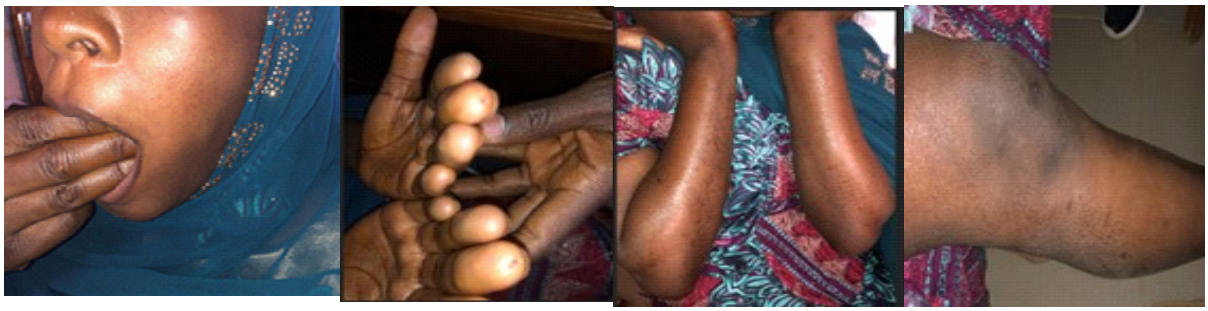
Case Report: MB is a17 year old female who present with 3 months history of body swelling, a week after febrile illness. She had taken Artemisinin combination therapy, otherwise no other drug history. No associated change in urine volume or hematuria. No joint pains or skin rashes. No other medical history of note. Examination revealed mainly facial and lower limb oedema with unremarkable systemic examination.

Her lab results were as follows: 24 hour urine protein 6.1g, Serum albumin 26g/L, Urine microscopy: no rbc or wbc, Total cholesterol 6.2mmol/L, Creatinine 59 ìmol/L. Hepatitis B and C negative, non reactive to HIV, High Serum C3 350 g/dl(101-182. Normal C4, Antinuclear antibody positive (1.81). Renal histology showed normal glomeruli with resorption granules and occasional calcified cast. The tubules, interstitium and blood vessels were unremarkable. Immunoflourescence to C3 weakly positive but negative to IgG, A and M. She had 1mg/Kg of Prednisolone and developed remission at 4th month of induction and then tapered over 6 months. Seven months later she developed thicken skin over the face and limbs from digits up to proximal to the elbows and knees. No associated systemic symptoms. Blood pressure and serum creatinine were normal and she remained in remission. Rheumatologist diagnosed Diffuse Systemic sclerosis. She has been doing well on Hydroxychloroquine, Azathioprine and skin moisturizers.

Conclusion: Nephrotic syndrome although rare can heralded Scleroderma.



Sections show 3 closely disposed glomeruli with unremarkable capillary tufts and peripheral glomerular basement membranes.



Pictures of the patient's different areas of skin involvement

MANAGEMENT OF ENVENOMATION INDUCED AKI WITH INTERMITTENT HAEMODIALYSIS IN A DOG

Faswal Pichan

Ethics Jurisprudence, Dr surroj-director of cochin pet hospital ,Dr sherin sha -chief surgeon in kochi pet hospital Department of Vetermacy Clinical Medicine

A fourteen month old Labrador dog (BRUNO) was presented to the pet hospital with a recent history of viper envenomation. Dog was vocalising and restless. On the day of presentation, seem creation and blood nitrogen (BUN) values were 3.7mg/dL and 89.1 mg/dL respectively. The serurm creatinine and blood urea nitrogen values elevated within two days to 6.7mg/dL and 138.6mg/dL respectively. The doy become oliguria.The clinical signs and laboratory values were consistent with acute kidney injury. Intermittent haemodialysis (IHD) was carried out as dog was refractory to medical management. Post IHD creatinine and BUN values were 6.7 mg/dL and BUN Values 101 mg/dL, respectively. Serum creatinine and BUN value increased to 7 mg/dL and 130 mg/dL, the next day after IHD. Second session of IHDreduced serum creatinine and BUN values to 6 mg/dL and 97.8 mg/dL. Dog continued to be dull, anorexic with oliguria. Third session of IHD helped in reduction of serum creationine and Oliguria resolved. The dog resumed his appetite and was clinically stable. Dog was observed for next 24 hours and discharged. On review after three days, dog exhibited considerable improvement; creatinine and BUN value were 3.1 mg/dL and 54.4 mg/dL, respectively. Ten days later follow up revealed that creatinine and BUN value stabilised at 1 mg/dL and 24 mg/dL. Dog showed alow and steady recovery from acute kindney injury overa period of 20 days.

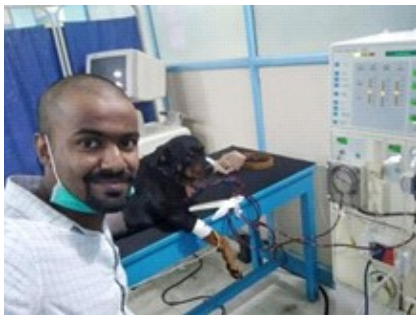
Viper envenomation induces kidney injury (Hrovat et at 2013) Intermittent haemodialysis is a renal replacement therapy which is used to alleviate lifethreatening azotaemia electrolyte and acid-base imbalances and control intravascular volume (Cowgill) and Elliott, 2000). This article describes a case viper envenomation induced acute acute kidney mjury in a dog, which was successfully managed with three sessions of intermittent haemodialysis.

Materials and Methods: A fourteen month old Labrador dog (Bruno) dog was restless, vomiting and vocalising Clinical examination revealed facial oedema, dullness and haematuria. Clotting time was on initially more than 20 minutes. Laboratory findings revealed scrum creatively (sCr) and blood urea nitrogen (BUN) values to be 4.9mg/dL and 99.1 mg/dL, respectively. On basis of anamnesis, clinical examination, and laboratory investigation findings, diagnosis of viper envenomation was made. Treatment was started with anti-venom, antibiotic inj Amoxicillin clavulante @ 15mg/kg, fluids Normal Saline, Inj Ondensctron @ 0.5mg/kg Inj. Pantoprazole @ 1mg/kg,. After initiation of treatment, clotting time reduced to less than 6 minutes.

Fluid therapy was continued for the next four days with Ringer 5 lactate and, Normal saline Antibiotic and ondensetron and pantoprazole were continued as well water intake and urine output were monitored. The sCr and BUN values elevated within two days to 6.4mg/dL and 130.6mg/dL respectively. The dog became

oliguric. The clinical signs and laboratory values were consistent with acute kidney injury stage V (IRIS, 2016). Intermittent haemodialysis (HID) was carried out as dog was refractory to medical management.

Result and Discussion: The dog was subjected to renal replacement therapy INTERMITTENT HEMODIALYSIS TO ALLEVIATE LIFE Breatining azotemia. (Cowgill and Elliott, 2000). Post first session of 1 HD, sCr and BUN decreased to 5.8mg/dL and 107 mg/dl, respectively. The sCr and BUN values again rose ..... Dy to 9mg/ and 135mg/dL, respectively. Second session of 1 HD has to be carried out. Post second session, sCr and BUN values reduced to 6 mg/dL and 97.8 mg/dL respectively . Dogs continued to be dull, anorexic with oliguria. The sCr and BUN value shot up us 7.5 mg/dL and 160 mg/dL within 36 hours. Third session of 1 HD was carried out which.



A further old Labrador dog (Bruno) was presented to the pet hospital with a recent history of viper envenomation. Dog was vocalising and resiless. On the day of presentation, scrum creatinine and blood urea nitrogen (BUN) values were 3.5 mg/dL and 95.1 mg/dL, respectively. The scrum creatinine and blood urea nitrogen valuve oliguria. The clinical signs and laboratory values were consistent with acute kidney injury. Intermittent haemodialysis (IHD) was carried out as dog was refractory to medical management. Post IHD creatinine and BUN values were 4.5 mg/dL and BUN values 104 mg/dL, respectively. Serum creatinine and BUN values increased to 8 mg/dL and 130 mg/dL, the next day after IHD. Second session of IHD reduced scrum cretinine and BUN values to 5 mg/dL and 98.8mg/dL. Dog continued to be dull, anorexic with oliguria. Third session of IHD helped in reduction of serum creatinine and BUN values from 8.4mg/dL and 150 mg/dL to 4.9mg/dL and 82.6 mg/dL, respectively, Oliguria resolved. The dog resumed his appetite and was clinically stable. Dog was observed for next 24 hours and discharged. On review after three days, dog exhibited considerable improvement, creatinine and BUN value were 4.3 mg/dL, and 64.4 mg/dL, respectively. Ten days later follow-up revealed that creatinine and BUN value stabilised at 1 mg/dL, and 27mg/dL. Dog showed slow and steady recovery from acute kidney injury over a period of 20 days.

Resolved oliguria and reduced sCr and BUN values to 5.9 mg/dL and 84.6 mg/dL, Dog was observed for next 24 hours and discharged. This findings is in agreement with Eatroff et aL, 2012. Ten days later follow-up revealed that sCr and BUN value stabilised at 1mg/dL and 27mg/dL. Dog showed slow and steady recovery from acute kindney injury over a period of 20 days.

Summary: A case of viper envenomation induced acute kidney injury in a dog was successfully managed with three sessions of intermittent haemodialysis.

References:

2000 p.528- 47. Eatroff ,. Hemodialysis In : Di Bartola SP, editor. Fluid therapy in small animal practice. 2nd edition, Philadclphia: WB Saunders, Chalhoub. S, Poeppel. K and Mitelberg.E 2012 , A.E, Langston, Cowgill LD, Elliott DA C.E, Longterm outcome of cats and dogs with acute kidney injury treated with intermittent haemodialysis: 135 cases (1997-2010), J. Am. Vet. Med. Assoc:241:1471-1478

MANAGEMENT OF MULTIPLE OBSTRUCTING RENAL CALCULI IN A THIRTY-YEAR-OLD PATIENT WITH AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE WITH FREQUENCY-DOUBLED DOUBLE-PULSE NEODYMIUM: YAG (FREDDY) LASER LITHOTRIPSY: A CASE REPORT

Awobusuyi Emmanuel Iretola, Omisanjo Olufunmilade, Oluwaseun Akinola, Awobusuyi Jacob Olugbenga

Background: Patients with autosomal dominant polycystic kidney disease experience long disease trajectories; however, factors such as hypertension, proteinuria and renal calculi have been observed to lead to rapid renal function impairment in patients with ADPKD. The incidence of renal calculi in patients with ADPKD is five to ten folds higher than that of the general population. This is thought to be due to the combined effect of anatomical abnormalities and metabolic risk factors hypocitraturia, hyperoxaluria, hyperuricosuria and low urine pHin these patients.

Management of Nephrolithiasis in ADPKD patients is one of the several special situations in which urinary lithiasis presents management challenges. This is due to the distorted anatomy that makes access to stone difficult and the high risk of complications from the procedure.

We report a case of a 30-year old man with multiple obstructive calculi and renal function impairment, who responded favourably to stone fragmentation with FREDDY laser lithotripsy with improvement in his renal function despite three years of symptomatic flank pain.

Case presentation: Mr. DB is a 30-year-old hypertensive man with CKD secondary to Autosomal Dominant Polycystic Kidney Disease (ADPKD) who presented at our hospital on the 19th of January 2019 with a three-year history of recurrent abdominal pain and worsening renal function.

Figure 1: Abdominal C-T showing renal calculi (thick arrow) and hydronephrosis (thin arrow) in the patient

The patient had intracorporeal ureteroscopic lithotripsyon the 2nd of February 2019.He was stone-free post-ithotripsy with no recurrence two years post urological procedure. His renal function has continued to remain stable two years after lithotripsy (Table 1).

Table 1: Serial serum urea and creatinine levels atfollow-up visits

	3/2/19	2/3/19	7/9/19	19/10/19	7/3/20	8/8/20	4/1/21
Serum creatinine	2.4	1.7	2.0	1.8	1.9	1.2	2.0
Serum urea	56	40	35	48	41	20	24

Discussion: The case presented had multiple obstructing calculi causing moderate calyceal clubbing and ureteral dilatation. Therapeutic intervention was indicated in the patient to relieve the multiple obstructions caused by the calculi and stop the damage to the renal parenchymal by hydrocalycosis and hydronephrosis.

Approaching nephrolithiasis in ADPKD patients presents many management challenges resulting from the distorted anatomy, making access to stones difficult. In addition, there is a high risk of complications from the procedure. Consequently, there is a need for choosing a treatment modality that is effective as well as safe.

FREDDY laser is a short-pulsed, double-frequency solid-state laser with wavelengths of 532 and 1064 nm. It has high safety (minimal tissue destruction) and rapid fragmentation characteristics. It potentially reduces the treatment times required for complete stone removal, especially for large stones. The patient experienced no complication during the procedure; he was stone-free after the procedure and remained clinically stable with stable renal function and no stone recurrence two years after the procedure.

Conclusion: The cost-effectiveness, high safety, and rapid fragmentation characteristics of the FREDDY laser makes it an excellent therapeutic modality for consideration in the management of nephrolithiasis in patients with ADPKD.

PERCEPTION AND ATTITUDES OF MEDICAL STUDENTS IN A NIGERIAN UNIVERSITY TOWARDS CLINICAL CLERKSHIP DURING THE CORONAVIRUS 2019 PANDEMIC

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Background: Since onset, the effect of the coronavirus disease (COVID-19) has been devastating. The need for social distancing had led to distortion of academic activities in schools. The aim of the study was to carry out a survey on the perception and attitudes of medical students towards clinical clerkship activities in Nigeria

Methodology: A descriptive cross-sectional study was carried out among medical students of a Nigerian University from January to March 2021. A semi-structured questionnaire with questions bordering on perception and attitude towards COVID-19; was self-administered to conveniently sampled participants

Results: Two hundred and sixty four clinical medical students completed the survey with mean age of 24.96 ± 4.36 years. Over 80% reported having knowledge of the disease transmission. A hundred and thirty students (49.2%) were not satisfied with extension of the academic calendar. Although most students and family members were worried about exposure to the virus, 190 (72.0%) students were willing to participate in the clerkship. Half of the students believed that on-line classes were no substitute for on-site clerkship trainings.

Conclusion: Most students were willing to continue clinical clerkship despite the pandemic. However, in order to reduce contact time with patients, there may be need to explore innovative and acceptable digital teaching methods that could complement clinical clerkship.

PREVALENCE OF KIDNEY IMPAIRMENT AND ITS ASSOCIATED FACTORS AMONG HIV-INFECTED ANTIRETROVIRAL TREATMENT - NAÏVE ADULT PATIENTS IN BAYELSA STATE, NIGER DELTA, NIGERIA

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Background: The burden of the human immunodeficiency virus (HIV) infection is highest in sub-Saharan Africa (SSA) including Nigeria. Determination of baseline kidney function is crucial in management.

Methodology: A retrospective study was carried out in the Niger Delta University Teaching Hospital (NDUTH) involving ART- naïve HIV infected persons presenting in clinic between years 2011 – 2020. Information retrieved from the case notes included socio-demographics, clinical and laboratory parameters. The Chronic Kidney Disease (CKD) Epidemiology (EPI) Collaboration formula was used to compute the estimated glomerular filtration rate (eGFR) while creatinine clearance (CrCl) was estimated with the Cockcroft Gault equation. KI was defined as eGFR< 60 mls/min.

Results: Complete data was retrieved for 210 individuals (mean age 40.07 ± 9.63 yrs) with females accounting for 59.0% of cases. The prevalence of KI was 13.8% while up to59.5 % had CrCl below 90mls/min. KI showed significant association with age >45 yearsp=0.009), married status(p=0.001),presence of co-morbidity(p = 0.01) and high HIV RNA load(p= 0.03). However, only age was independently associated with KI {AOR 3.432{1.231- 9.569)}.

Conclusion: KI was prevalent in the patients with age < 45 years being its sole determinant. However, 'being married', having co-morbidities and high viral loads also showed significant association. There is need for assessment of renal function in HIV- infected persons before initiation of ART.

SYSTEM ICAMYLOIDOSIS PRESENTING AS NEPHROTIC SYNDROME: A REPORT OF THREE CASES

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Background: Amyloidosis is an uncommon cause of nephrotic syndrome associated with poor prognosis. In resource-constrained settings, diagnosis of renal amyloidosis is rarely made because of infrequent kidney biopsies. We present here a series of three cases of amyloidosis diagnosed over an 8-month period.

Cases: The patients were two males and one female. Their age range was 45 – 56years. All three presented with progressively worsening body swelling. In the two male patients, hypertension had been diagnosed at the onset of the illness while the female had no history of hypertension. On examination, all three patients were pale and had marked bilateral pitting pedal oedema up to the thighs. Except for one with hepatomegaly, intrabdominal organs were not palpably enlarged in the patients.

Proteinuria on urinalysis ranged from 1+ to 4+, haemoglobin concentration from 6.9 – 12.3g/dL and presenting serum creatinine was between 51 and 140umol/l. Urine protein/creatinine ratio at presentation ranged from 0.4 – 3.2g/g. Ultrasound scan revealed hepatomegaly in two of the patients and splenomegaly in one. Kidney size was normal on in two of the patients while the third had bilaterally enlarged kidneys. In both male patients, renal function deteriorated rapidly with doubling of serum creatinine over a 2 – 3 week period. In all three, serum and urine free light chains were elevated

One patient had both kidney biopsy and bone marrow trephine, the other two had either a kidney biopsy or bone marrow. In all three, there were tissue deposits of amorphous eosinophilic materials that tested positive for congo red in keeping with amyloidosis. Two of the patients had a course Bortezomib, Cyclophosphamide and Dexamethasone, the third is awaiting commencement of therapy. One of the patients treated unfortunately passed away and the other two are being followed up at the nephrology clinic.

Conclusion: This series highlights the importance of tissue diagnosis in the evaluation of patients with nephrotic syndrome in order to accurately establish the underlying and therefore offer appropriate therapy.

EXCELLENT OUTCOME AFTER DESENSITIZATION IN HIGH IMMUNOLOGICAL RISK KIDNEY TRANSPLANTATION

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Multiple blood transfusion, past and recurrent pregnancies, previous kidney transplant and high donor specific antibodies all increase immunological risk and can act as a barrier to a successful kidney transplant. In order to achieve and get good outcomes, there will be need for some sort of desensitization.
We are presenting a case report of a young man who had a failed graft from BK nephropathy and subsequently had multiple blood transfusions. He also had very high donor specific antibodies directed against the Donor's HLA prior to transplant. The hospital established protocol for desensitization was followed and he had a successful kidney transplantation outcome.

The case report highlights Zenith medical and kidney center's desensitization protocol, efficient and effective tissue typing laboratory support and good clinical outcome in patient

IMMUNOSUPPRESSANT MEDICATION ADHERENCE AMONG KIDNEY TRANSPLANT RECIPIENTS IN NIGERIA: A SINGLE CENTRE CROSS-SECTIONAL STUDY

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Background: Non-adherence to immunosuppressant therapy (IST) is a serious problem that can cause renal allograft rejection, graft loss and death. Despite the importance of IST adherence and the growing scale of kidney transplant in Nigeria, non-adherence to IST remains understudied in kidney transplant recipients (KTRs) in Nigeria. This study aims to describe the prevalence of non-adherence to IST, investigate the barriers to adherence and identify any associated predictive factors for non-compliance in adult KTRs.

Methods: Self-reported survey data is being collected from KTRs attending outpatient clinic at Zenith Medical and Kidney Centre (ZMKC), using three validated questionnaires (Basel Assessment of Adherence to Immunosuppressive Medications Scale (BAASIS), Immunosuppressant Therapy Barrier Scale (ITBS) and the Beliefs about Medicines Questionnaire (BMQ)) and socio-demographic data.

Results: We present preliminary results from a total of 16 respondents included in the pilot survey. 56.3% (9 respondents) were categorised as non-adherent, with 18.8% (3 respondents) skipping doses, 18.8% (3 patients) altering the prescribed amount and 43.8% (7 patients) delaying doses by more than 2 hours in the past month. Non-adherent patients had higher mean ITBS scores (21.8 ± 5.9) than adherent patients (17.7 ± 4.6), indicating more identified barriers to their adherence.

Conclusion: The above stated results represent preliminary findings and therefore require further data collection and analysis before definitive conclusions can be made.

Keywords: *Kidney transplant, medication adherence, immunosuppressive therapy, patient engagement, patient behaviour*

THE CLINICAL FEATURES, IMAGING CHARACTERISTICS AND CLINICAL OUTCOMES OF POST TRANSPLANT PATIENTS WITH COVID-19 IN A NIGERIAN KIDNEY CENTER FACILITY

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Severe acute respiratory syndrome corona virus 2 (SARS-CoV-2 is caused by the novel COVID-19 virus. Middle aged, elderly aged adults and patients with co-morbidities and immunosuppressive agents may experience severe signs and symptoms that can lead to mortality. This case series assesses the clinical features, imaging characteristics, and clinical outcomes for 3 patients with COVID-19 with a history of kidney transplantation in our facility. Patients were evaluated for symptoms, laboratory data, imaging findings, and outcomes from June 2020 to August 2020. High grade fever, cough and prominent gastrointestinal symptoms were the most common clinical symptoms, noted in all the patients. Two of the three had a normal white blood cell count, one had leucopenia and none had leukocytosis at presentation. A combination of consolidation and ground glass opacity was the most predominant (75%) pattern of lung involvement on computed tomography (CT). All 3 patients recovered from severe COVID-19 pneumonia and were discharged. CT imaging played a major role in aiding the diagnosis which was collaborated with a positive polymerase chain reaction of COVID-19. Future long term follow up studies are needed to elucidate outcomes, and management options in Kidney transplant patients with COVID-19