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Oral abstracts

01. A review of the patterns of clinical presentation, histopathological classes, and outcomes of lupus nephritis at Helen Joseph Hospital

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Introduction: Lupus nephritis (LN) is a significant cause of secondary glomerular disease in South Africa. The entity carries a worse prognosis in people of African descent; early identification and treatment are required to improve patient outcomes. This study aimed to evaluate the potential of presenting features in identifying patients at risk for adverse lupus nephritis outcomes.

Methods: A retrospective review of biopsy-proven LN diagnosed over a 10-year period at Helen Joseph Hospital was undertaken. Clinical, histopathological and renal outcomes data were extracted from 48 patient records. Kaplan-Meier renal survival curves were fitted and compared using Cox-Mantel F testing. General discriminant analysis was used to determine differences in presenting factors between histological and outcomes groups. Effect of clinical and histological parameters on renal outcomes was analysed using multifactorial Cox and linear regression.

Results: 72.7% of patients were of Black African ancestry with median age at diagnosis of 26.5 years. The majority of lesions were proliferative LN (66%); class III was most common (25.5%). Proliferative lesions were associated with higher creatinine (P = 0.007); an eGFR below 90mL/min/1.73m^2 increased the odds of proliferative LN (OR = 5.60; 95% CI 1.06 - 29.59; P = 0.043). Proliferative LN was associated with a trend towards poorer renal outcomes (P = 0.057); higher baseline eGFR was associated with better preserved kidney function at follow up (P = 0.003). Baseline urine WCC was inversely related to eGFR and directly related with creatinine at follow up (P = 0.041 and P = 0.001 respectively).

Conclusions: The present study demonstrates a possible role for baseline eGFR and leukocyturia in predicting the presence of proliferative LN. Since proliferative LN is associated with poorer kidney survival, these investigations may identify patients likely to benefit from empiric high-dose immunosuppression when access to biopsy confirmation may be delayed.

02. Enhancing the peritoneal dialysis patient experience: usability and satisfaction with the New Vivatum Alba CAPD System

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Introduction: Peritoneal dialysis (PD) can be performed manually through Continuous-Ambulatory-Peritoneal-Dialysis (CAPD) or using Automated-Peritoneal-Dialysis (APD). However, access to APD is limited, particularly in low-resource settings. For over 40 years, CAPD has depended on manual exchanges. This study aimed to evaluate the usability and patient experience of performing CAPD using the innovative Vivatum-Alba-CAPD-System.

Methods: We conducted a two-phase, multi-centre study using qualitative and quantitative methods. In the first phase, a video introducing the Vivatum-Alba-CAPD-System; measured their vital signs, comparing standard methods with those provided by the Vivatum-Alba-CAPD-System. Participants completed an iPOS Renal questionnaire to gauge usability. In the second phase, patients practiced using the Vivatum-Alba-CAPD-System on an abdominal simulator, with the nurse investigator observing. Finally, patients performed a live PD exchange with the device and completed a follow-up questionnaire to assess usability and satisfaction.

Results: A total of 42 participants were enrolled, with 31 completing all study phases. The mean age was 51.3 years, and 53% were male. Participants had been on CAPD for an average of 31 months SD 20.5. 65% isiXhosa or isiZulu speakers, 16% Afrikaans, and 19% native English speakers. During the first visit, the majority of hypertensive participants exhibited symptoms related to fluid overload 60%. All participants, except one, expressed strong confidence in the system's ability to effectively manage their kidney failure. The system was met with high levels of satisfaction, with vital signs monitored by the new system showing consistency with those recorded by standard care protocols in the PD unit.

Conclusion: The Vivatum Alba-CAPD-System exceeded patient expectations, offering ease of use and strong interest in long-term adoption. Given its positive impact on patient experience and satisfaction, as well as its reliability in measuring ultrafiltration, we recommend making the device available to all CAPD patients.

03. Characteristics and outcomes of biopsy-proven lupus nephritis in the Eastern Cape province of South Africa

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Introduction: In Africa, the treatment outcomes of biopsy-proven lupus nephritis (LN) are not well known. This is especially true in the current era where evidence-based treatment options are more widely available.

Methods: We undertook a retrospective study of 131 patients with biopsy-proven LN who were treated at the Livingstone Tertiary Hospital (LTH) Renal Unit in Gqeberha, South Africa and who underwent kidney biopsy between 01 January 2012 and 31 December 2021. Sub-analysis of 107 patients with Class III/IV/V LN was performed. Response was defined as per KDIGO 2021 guidelines.

Results: Mean age was 31.4 ± 12.7 years; females 86.3%. At 6-months follow-up, 68.9% of patients had complete or partial response to treatment. This increased to 70.3% and 72.6% at 18 and 30 months, respectively. Twenty-three patients were lost to follow-up, while 7 (5.3%) patients progressed to kidney failure. There were 3 (2.3%) deaths. Predictors of poor response included elevated baseline serum creatinine (OR = 2.53, 95% CI 0.99 – 6.52, P = 0.054), decreased eGFR (OR = 2.92, 95% CI 0.94 – 9.09, P = 0.065) and elevated blood pressure (OR = 6.06, 95% CI 1.11 – 33.33, P = 0.038) at biopsy. There was no difference in response between those receiving mycophenolic acid derivatives or cyclophosphamide for induction (P = 0.459). Infections were the most common adverse event with 50 infections seen in 39 (29.8%) patients. Herpes viral infections were frequently noted (n = 12) accounting for 24.0% of all documented infections.

Conclusion: Response rates were similar in this cohort compared to other contemporary studies. Predictors of poor response included elevated baseline serum creatinine, decreased eGFR and an elevated blood pressure at time of the biopsy. There were no significant differences in outcomes between cyclophosphamide and mycophenolate as induction agents. Infections were the most common adverse event, although the mortality rate remained low at 2.3%.

04. Superior vena cava obstruction: a rare cause of oesophageal varices

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Proximal oesophageal varices, or "downhill varices," are a rare manifestation typically associated with superior vena cava (SVC) obstruction, contrasting with the more common distal oesophageal varices linked to portal hypertension. These types of varices rarely complicate with upper gastrointestinal bleeding (UGIB).

We present a case of a 29-year-old male with end-stage renal disease due to focal segmental glomerulosclerosis, who has been on haemodialysis for five years and experienced multiple vascular access issues. The patient presented with a massive UGIB, and imaging revealed downhill oesophageal varices due to SVC obstruction. Prompt diagnosis and intervention, including the use of a self-expanding metallic stent and balloon venoplasty, resulted in a favorable outcome.

This case underscores the importance of recognizing less common causes of oesophageal varices, particularly in patients with complex medical histories. Understanding the clinical features and imaging findings is crucial for accurate diagnosis and appropriate management.

05. Clinical, prognostic, and evolutionary aspects of acute kidney injury in intensive care: Experience from Ibn Rochd University Hospital, Casablanca

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Introduction: In intensive care units, acute kidney injury (AKI) occurs in 30-60% of patients and is associated with an in-hospital mortality rate exceeding 60% among those who require dialysis. The onset of AKI also increases the risk of developing chronic kidney disease (CKD), even after the acute episode has resolved.

Patients and Methods: This multicentre, prospective, descriptive, and analytical study aimed at epidemiological and prognostic assessment was conducted over a one-year period, from June 1, 2022, to May 31, 2023. The study included all patients admitted to the medical-surgical intensive care units of the University Hospital of Casablanca who developed AKI, as defined by KDIGO criteria, during the study period. All patients received nephrological follow-up to assess their renal function at hospital discharge and at 3, 6, and 12 months.

Results: A total of 170 patients were included, with 52% being female. The median age was 45.2 years ± 22.93. Clinically, 28.4% of patients were oligoanuric, and 54.8% had multi-organ failure, primarily involving neurological and respiratory systems. The median serum creatinine level was 37.6 mg/L ± 19.82. AKI was primarily organic in 43.1% of cases and functional in 40.2%. The main causes included dehydration, sepsis, and tumour-related obstruction. Extracorporeal renal replacement therapy was required in 25.5% of patients. The in-hospital mortality rate was 35%. Risk factors included age over 60 years, hypotension, and blood transfusion. Mortality among survivors was 3% at 6 months and increased to 6.2% at 12 months. The progression to chronic kidney disease and end-stage renal disease (ESRD) increased within the first year following the acute episode. After 12 months, 43.5% of patients maintained normal renal function, 45.6% developed CKD, and 10.9% progressed to End-Stage Renal Disease.

Conclusion: AKI is now recognized as a risk factor for chronic kidney disease and long-term mortality, highlighting the importance of ongoing nephrological monitoring.

06. Continuous ambulatory peritoneal dialysis technique failure of adult patients treated at Universitas Academic Hospital, Bloemfontein, South Africa

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Introduction: CAPD is one of the kidney replacement therapy modalities utilized in patients with kidney failure. It is a preferred modality in most resource limited settings as it is logistically more accessible and cost-effective. Technique failure remains a challenge and is associated with increased risk of morbidity and mortality. We aimed to describe the reasons for CAPD technique failure. Furthermore, to describe the CAPD patient survival over a 5-year period.

Methods: In this descriptive cross-sectional study, we conducted a retrospective file review of patients with ESKD whose PD catheter was removed or died while on the PD at Universitas Academic Hospital from 01 January 2015 until 31 December 2019. The demographic, clinical and laboratory data were collected from patient's medical records. Clinical outcomes were technique failure and patient's survival.

Results: Ninety-one patients met the inclusion criteria, of whom majority were males (56.0%). Median age at the start of PD was 40 (IQR, 18-58) years. Most patients were single (57.3%) and unemployed (70.0%). Hypertension was the leading cause of ESKD (51.7%) followed by HIV associated conditions (19.8%). Technique failure rate was 31.9%, 35.2%, 13.2%, 8.8%, and 11.0% at 1 ,2, 3, 4 and 5 years respectively. Patient survival rate at 5 years was 63.7% with a median survival time of 26 (IQR 1-54) months. Peritonitis was the leading cause of technique failure (57.1%).

Conclusion: Peritonitis was the leading cause of technique failure. Younger patient's age and the use of Dianeal® PD system were associated with increased likelihood of technique failure. Socio demographic, laboratory and clinical factors associated technique failure or death. Patient survival rate at 5 years was comparable with other published studies. Measures to prevent PD peritonitis needs to be put in place. Improving access to kidney transplantation is the ultimate goal of improving outcomes of the ESKD population.

07. Causes of chronic kidney disease and their associations with cardiovascular risk and disease in a sub-Saharan low-income population.

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Introduction: The prevalence of chronic kidney diseases (CKD) is more than 10%, worldwide. There seem to be differences in the causes of CKD between high- and low-income countries.

Methods: In a prospective cross-sectional study, we reviewed presumed causes of CKD and associated cardiovascular risk factors in 743 consecutive patients from a low-income population at the nephrology clinic at Chris Hani Baragwanath Academic Hospital.

Results: Hypertensive nephropathy (HNP) (60.2%) is by far the leading cause of CKD followed by diabetic nephropathy (DNP) (24.4%), HIV-associated nephropathy (HIVAN) (20.0%), and glomerular disease (13.6%). Traditional cardiovascular risk factors were identified to be hypertension (87.6%), dyslipidaemia (59.9%), diabetes (25.8%) and smoking (6.7%). HIV infection was the leading non-traditional cardiovascular risk factor at 39.4% of the study population. Established cardiovascular disease was 5.6% in this cohort. Pulse pressure as a marker of aortic stiffness was larger in patients with concurrent HNP and DNP than in those with HPN alone. HNP and DNP were associated with pulse pressure independent of one another. The product coefficient mediation analysis, mean or distention arterial pressure, accounted fully for potential effect of DNP on pulse pressure. HNP or concurrent HNP and DNP or DNP were associated with markedly increased prevalence of uncontrolled systolic blood pressure. Demographic characteristics and DNP adjusted products of coefficient mediation analysis confirmed that mean arterial pressure did not mediate any potential effects of HNP on pulse pressure. In the population at large, 70% of patients with diabetes have comorbid hypertension that increases the cardiovascular risk. In this study cohort, 93.6% with diabetes had concurrent hypertension.

Conclusion: HNP is by far the leading presumed cause of CKD. Traditional cardiovascular risk factors such as hypertension and diabetes take the lead in this study group. Aortic stiffness is a key component of CKD induced cardiovascular disease.

08. Multiple myeloma in a young thalassaemic woman revealed by kidney disease

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Multiple myeloma or Kahler's disease is the haematological malignancy most frequently associated with the production of monoclonal immunoglobulins. It is classically male-dominated and is most commonly seen between the ages of 60-69. Occurrence at a young age is rare. The aim of our work is to shed light on the particularities of its clinical presentation and management in young subjects. We report the case of a 30-year-old female patient with heterozygous beta-thalassaemia receiving regular blood transfusions who initially presented with a gastrointestinal complaint of postprandial vomiting and a glomerular syndrome with proteinuria of 8. 2g/24h associated with renal failure at 25mg/l plasma creatinine, for which she was referred to the nephrology department of the CHU Ibn Rochd in Casablanca for further treatment. Examination on admission revealed an asthenic patient, normotensive to 126/72 cmHg, with diffuse bone pain and moderate splenomegaly. Diuresis was 2 litres, and the urine dipstick showed a protein cross and a blood cross. There was no oedema of the lower limbs. Biological assessment showed plasma creatinine at 25mg/l, urea at 1.03g/l, 24-hour proteinuria at 8.2g/d, with proteinemia at 65g/l and albumin at 36g/l. Corrected serum calcium was 98 mg/l. The rest of the blood and urine ionograms were unremarkable. The sedimentation rate was accelerated to 87 at the first hour. The haemogram showed microcytic hypochromic anaemia at 8.6g/dl. Plasma protein electrophoresis showed a decrease in beta2 and gamma globulins. In this context, a renal biopsy was performed with the result showing an overall appearance suggestive of Lambda light chain myelomatous tubulopathy. His renal function deteriorated to 47mg/l plasma creatinine. Treatment consisted of dexamethasone and bortezomib. The prognosis for multiple myeloma with renal involvement is poor and depends largely on the time take to initiate treatment and the extent of the disease.

09. Presentation of HIV-associated thrombotic thrombocytopenic purpura and response to plasma exchange: a 10-year retrospective single-centre experience

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Introduction: HIV is a significant aetiological factor in thrombotic thrombocytopenic purpura (TTP) in regions of high seroprevalence. Description of the presentation, response to therapy, and outcomes of HIV-associated TTP (HIV-TTP) is, however, limited by small case series. We here describe a large cohort of patients receiving plasma exchange (PEX) for HIV-TTP yet reported to better characterize the entity and to analyse the appropriateness of PEX as a treatment strategy.

Methods: We retrospectively reviewed 98 cases of HIV-TTP treated with PEX between 1/1/2010 – 31/12/2020. The presentation, and mortality and renal outcomes of this cohort are described, and complications of PEX therapy are characterised. The effect of HIV infection and HIV-TTP clinical severity on mortality, PEX complications, and renal outcomes are analysed using appropriate regression models. Results: HIV-TTP is associated with advanced HIV infection and shows a predilection for young Black women. Neurological deficit is a common presenting feature. Mortality remains increased in HIV-TTP in patients receiving PEX; renal dysfunction increases mortality risk, as may choice of plasma infusant. Sepsis is not infrequent and contributes to mortalities; risk of infection increases with PEX duration. HIV infection parameters do not appear to affect risk of mortality or sepsis. Mild residual renal dysfunction is not uncommon in survivors.

Conclusion: Mortality remains high in HIV-TTP treated with PEX, and sepsis-related complications are of concern. Randomized prospective studies are required to evaluate the use of PEX versus plasma infusion and infusant choice in HIV-TTP. Longer duration follow-up studies are needed to evaluate residual renal dysfunction in survivors of HIV-TTP.

10. Epidemiology and referral patterns of chronic kidney disease in Johannesburg, South Africa: a single centre experience

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Introduction: Chronic kidney disease (CKD) contributes significantly to the global non communicable disease burden. Early intervention ameliorates progression of CKD; recognition of at-risk patient groups may improve detection through screening. We here report the epidemiology and referral patterns of CKD in the largest series of patients yet analysed in sub-Saharan Africa.

Methods: A retrospective clinical records review of patients attending a specialist nephrology outpatient clinic between 1 January 2011 – 31 December 2021 was undertaken. Demographic data, ascribed aetiology of kidney disease, comorbidities, and eGFR at referral were described for the cohort. Age and eGFR at referral were compared between ethnicities, sexes, and nationality categories using appropriate testing. Stepwise multivariate logistic regression was used to determine the effect of age, gender, ethnicity and immigration status on aetiological category of CKD and referral pattern.

Results: Black African patients who comprised the majority of the sample cohort were younger at referral and more frequently female than other ethnicities; non-nationals were younger at referral than South Africans. Hypertension-associated kidney disease was the leading ascribed aetiology of CKD (40.7%), followed by diabetic kidney disease (DKD) (19%), glomerular disease (12.5%), and HIV-associated kidney diseases (11.8%). Hypertension-related (25.9%) and diabetic (10.7%) kidney diseases were not uncommon in people living with HIV. Advancing age and male sex were associated with hypertensive nephropathy, DKD and obstructive uropathy; males were at increased risk of HIV-associated kidney disease and nephrotoxin exposure, as were patients of Black African ethnicity. 47.8% of patients were referred in CKD G4 or G5. Non-national immigration status and diabetes were associated with late referral; antecedent diagnosis of HIV reduced late referrals.

Conclusion: Hypertension, diabetes, and HIV remain important aetiological factors in CKD. Referral to nephrology services occurs late. Interventions and policy reform targeting at-risk populations are required to improve referral practices.

11. Management and outcomes of inpatient referrals to state sector specialist nephrology services over a 12-month period

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Introduction: Capacitation of resource-constrained state nephrology services requires a holistic view of the work of these units. While registry and other data has provided insight into the management of outpatients with chronic kidney disease, characterization of the management and outcomes of inpatient referrals is lacking. We therefore analysed these parameters amongst inpatients referred at our institution over a 12-month period.

Methods: Anonymized data was extracted from clinical records of 963 patients comprising 1179 inpatient referrals over the period 1/2/2023 – 28/2/2024. Duration of hospitalization, prescription of dialysis, and patient mortality outcomes were described; factors affecting these outcomes were analysed using stepwise regression modelling.

Results: Inpatients were followed for a median of 9 days (interquartile range 5 – 16 days), contributing a total of 14522 inpatient visits. Prescription of acute dialysis increased follow-up duration (ß 0.18 ± 0.08, P = 0.017); dialysis unit patients admitted by Nephrology had shortened hospitalization (ß -0.14 ± 0.05, P = 0.005). Thirty-five percent of admissions received dialysis, with acute dialysis provided to 24% of referrals. AKI (OR 2.11, 95% CI 1.20 – 3.72, P < 0.001) increased and older age (OR 0.98, 95% CI 0.97 – 0.99, P = 0.005) reduced probability of acute dialytic support. Acute dialysis was more commonly prescribed for AKI due to sepsis / infection (21.1%), CKD G5 in preparation for KRT access (16.8%), and dialysis access failures (15.4%). The crude inpatient mortality rate was 17.2%; kidney failure increased (OR 3.28, 95% CI 0.84 – 12.73, P < 0.001) and AKI (OR 0.27, 95% CI 0.11 – 0.66, P < 0.001) and acute dialysis (OR 0.23, 95% CI 0.15 – 0.36, P < 0.001) reduced mortality risk.

Conclusion: Renal dysfunction prolongs hospital admission and increases mortality risk. A substantial proportion of inpatient referrals require dialytic support. Adequate capacitation of nephrology services is required to improve patient outcomes.

12. Navigating the storm: a case of post-transplant survival amidst multiple complications

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Introduction: Renal transplantation provides patients with end stage kidney disease an opportunity for an enhanced quality of life. It does, however, impart risks to these patients. This case highlights the complexities associated with transplantation in a middle-income country.

Clinical Case: A 43-year-old male patient with hypertensive-related ESKD on haemodialysis for 7 years, via a right internal jugular permanent catheter, presented for a cadaveric renal transplant. He received an extended criterion allograft. His post transplantation course was complicated by sepsis (central line associated blood stream infection) with infective endocarditis and septic shock, hydronephrosis, allograft rejection and delayed graft function (DGF). Blood cultures drawn from the permanent catheter cultured a methicillin-resistant Staphylococcus epidermidis. Subsequent blood and urine cultures revealed Ceftriaxone-sensitive Escherichia coli. Transesophageal echocardiogram showed severe aortic regurgitation secondary to a vegetation on the right coronary cusp of the aortic valve. His renal allograft biopsy reported extensive tubule interstitial nephritis (TIN), and borderline acute T-cell mediated rejection. Radiological investigations confirmed grade 3 graft hydronephrosis due to a ureteric stricture. The patient was treated with antimicrobials for a total of 53 days, initially with Linezolid and Ceftriaxone. After 16 days the Linezolid was changed to Vancomycin due to its possible aetiology of the TIN on allograft biopsy. On day 41 of admission, he underwent an aortic valve replacement and was initiated on warfarin. A DJ stent was inserted to relieve the ureteric obstruction. His rejection was treated with a 3-day methylprednisolone pulse and intensification of oral immunosuppression (tacrolimus, mycophenolate mofetil and prednisone). His creatinine steadily improved and he was discharged on day 65.

Conclusion: This case report highlights the potential challenges of managing ESKD patients undergoing transplantation. Prolonged use of intravenous dialysis catheters increases the risk of infection, especially in patients receiving immunosuppression. DGF may be related to a number of factors post transplantation.

13. Nephrotic syndrome in adults: prevention of thromboembolic risk

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Introduction: Nephrotic syndrome (NS) is associated to an increased risk of thromboembolic events (TE), prompting recommendations for prophylactic anticoagulation (PAC). This study assesses the effectiveness of PAC in reducing thrombotic risk and examines the associated bleeding complications in patients with NS.

Methods: We conducted a retrospective, monocentric study including patients hospitalized with NS between January 2022 and May 2024, who received PAC. Clinical, biological, and histopathological data were analysed, with a focus on the incidence of TE and haemorrhagic events. Patients on anticoagulants at the onset of NS, or those with contraindications, were excluded. Bleeding episodes were classified as minor or major.

Results: Among 18 patients with NS, 7 received PAC, comprising 3 women and 4 men, with a median age of 45 years [26-70]. The 24-hour proteinuria ranged from 3 to 16 g/24h, with hypoalbuminemia observed between 15 and 28 g/l The aetiologies of NS were varied, including diabetic nephropathy, membranous glomerulopathy, focal segmental glomerulosclerosis, and others. PAC regimens included vitamin K antagonists in 3 cases and unfractionated heparin in 4 cases. Over an average follow-up of 6 months, we recorded 2 TE cases. Haemorrhagic complications occurred in 4 patients receiving PAC, with 1 case of epistaxis and 3 cases of gastrointestinal bleeding. Major bleeding episodes were observed only in patients on PAC combined with antiplatelet therapy.

Conclusion: While PAC in patients with NS appears effective in reducing the risk of TE, it may be associated with an increased incidence of bleeding complications, particularly when combined with antiplatelet therapy. The risk-benefit balance of PAC in NS requires careful consideration, especially in the absence of robust clinical trial data.

14. Emergent haemodialysis in elderly patients: a descriptive study

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Introduction: The incidence of renal failure has increased markedly in the elderly, posing a major public health challenge. Emergency haemodialysis in those over 65 requires careful consideration of factors such as vascular access, underlying conditions, and comorbidities. However, the scientific literature lacks detailed studies on this specific population. This study aims to descriptively analyse the clinical and biological aspects, haemodialysis session parameters, therapeutic outcomes, and complications in elderly patients undergoing emergency haemodialysis.

Methods: This is a cross-sectional study conducted over one year, including patients over 65 years old who presented with acute or chronic renal failure and required an emergency haemodialysis session. Patients already on dialysis were excluded. Data were collected from patients aged 65+ who received emergency haemodialysis at Mongi Slim Hospital, Tunisia, over one year. Inclusion required a rapid decline in renal function. Clinical characteristics, biological parameters, outcomes, and complications were analysed descriptively.

Results: Over one year, 29 patients aged 65+ were included, with a mean age of 73 years and a sex ratio of 1.23. Most patients (85.7%) were referred from the emergency department. Hypertension, diabetes, and heart disease were present in 81.5%, 59.3%, and 29.3% of cases, respectively. Chronic renal failure was found in 33.3%. Haemodialysis indications included hyperkalemia (37.9%), acute pulmonary edema (31%), severe metabolic acidosis (20.7%), transfusion (17.2%), and uremic syndrome (6.9%). A femoral catheter was used for vascular access. Left ventricular ejection fraction was below 40% in 37.5% of cases. Median hemoglobin and serum calcium levels were 9.35 g/dL and 2 mmol/L, respectively. Sessions lasted 3 hours on average, with 87% using a 15L filter and 67.9% having a pump flow rate of 280 ml/min. Anticoagulation was adjusted by weight. Peridialytic complications included hypotension (49.5%), nausea and vomiting (14%), and hypoglycemia (6%). In-hospital mortality was 16.9%.

Conclusion: In conclusion, this study highlights the specific challenges encountered in managing acute renal complications in elderly patients, underscoring the importance of early and effective emergency haemodialysis intervention. Early and accurate detection of acute renal failure and undiagnosed chronic kidney disease is crucial to positively influence the prognosis of these patients.

15. The risk factors for progression of chronic kidney disease in a cohort of South African black patients

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Introduction: Increasing prevalence of chronic kidney disease (CKD) is a global health concern. Complex and heterogenous patient factors influence the natural course of CKD. We examined the relationship between predefined risk factors and the rate of progression and outcomes of CKD.

Methods: Retrospective chart analysis was performed involving a cohort of 265 adult patients who presented at Chris Hani Baragwanath Hospital during 2010 to 2020. Descriptive statistics representing demographic profiles were examined, as well as associations between risk factors and outcomes. Estimated glomerular filtration rate (eGFR) decline was computed based on the recorded annual eGFR measurements. To examine the relationship between risk factors, eGFR change rate, and categorical patient outcomes, regression analysis was performed.

Results: The mean age of participants was 56.6 (13.8) years; males constituted 144 (54%) of the study group. Major risk factors included hypertension (83%), diabetes (39%), and HIV (35%). Many patients were impacted by multiple concomitant risk factors (61%), with hypertension being a co morbid diagnosis in >50% of patients with diabetes and HIV. The annual mean eGFR decline rate over four years was 1.63 mL/min/1.73 m2. Decline rate was higher for diabetics: 2.3 ml/min/1.73 m2 (SD 3.8), almost double that of non-diabetics. Baseline-stage CKD 3A progressed more rapidly than CKD 3B. The mean eGFR was 28.0 mL/min/1.73 m2, with an average decline rate over the study period of 26%. Significant predictors of a higher-than-average rate of eGFR decline over the study duration were diabetes and dyslipidaemia (OR = 6.65 95% CI: 1.2–34.8). Age, HIV, and smoking also contributed to the rate of decline. Hypertension was not a strong prognosticator in the model. Acute kidney injury (AKI) was a frequent complication, noted in 44 (17%). When documented AKI cases with a significant decline in eGFR were excluded, the overall nature of the relationships reported based on the full sample remained unchanged.

Conclusion: Common modifiable risk factors, when present at initial evaluation, were demonstrated to accelerate CKD progression and have worse outcomes. These patients are most likely to benefit from close monitoring, tighter risk factor control, and earlier planning for renal replacement therapy.

16. Baseline characteristics in people with type 2 diabetes in Sub-Saharan Africa: results from the iCaReMe global registry

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Introduction: Hypertension (HTN) and type 2 diabetes (T2D) are the most common risk factors for heart- and kidney-related complications, increasing the risk of heart failure (HF) and chronic kidney disease (CKD), both of which are associated with a higher risk of cardiovascular death. Although sub-Saharan Africa bears a disproportionately high burden of cardiometabolic diseases, there is a scarcity of real-world data on patients' characteristics, risk factors, and management practices.

Methods: The iCaReMe Global Registry (NCT03549754) is a prospective registry collecting data from routine clinical practice in patients with T2D, HTN, HF, and/or CKD. In this report, we included data of T2D patients enrolled between February 2019 and April 2024 from five countries (Kenya, South Africa, Ghana, Ethiopia, and Nigeria).

Results: Overall, 1462 adults (mean [SD] age of 58.98 [12.38] years, 53.8% females) with T2D were enrolled. In patients with available data, 80.4% had HTN, 12.4% had CKD confirmed by UACR or measured GFR, and 10.3% had both HTN and CKD. When patients were categorized according to their computed eGFR, stage 3-5 CKD were reported in 27.8% of patients with available eGFR data (N=811). The prescribed medications at baseline included anti-diabetic therapies (97.9%), anti-hypertensive therapies (73.2%), anti-lipidemic therapies (59.4%), anti-platelet therapies (15.3%), anti-HF therapies (3.3%), and cardiac therapies (0.96%).

Conclusion: The initial findings suggest that eGFR-based screening may identify a larger proportion of patients with advanced kidney disease. Additionally, most T2D patients were on anti-hypertensive and anti-lipidemic medications. These findings underscore the importance of comprehensive screening and improved therapeutic strategies to prevent the progression of CKD in T2D patients in this region.

17. Histological profile of renal involvement in multiple myeloma

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Multiple myeloma (MM) or Kahler's disease is the haematological malignancy most frequently associated with the production of monoclonal immunoglobulins. Renal involvement is frequently associated. The prognosis appears dark despite advances in treatment. The main objective of our study is to determine the histological profile of renal involvement in multiple myeloma. We conducted a retrospective descriptive study spread over 5 years from January 2018 to December 2023 including all patients with multiple myeloma with renal involvement and managed in our nephrology department at CHU Ibn Rochd in Casablanca. A total of 34 patients with a mean age of 54.12 years and a male predominance of 55.9% were enrolled. Renal involvement was the first sign of MM in 82.3% of cases, revealed by renal failure in 82.3% of cases with a mean creatinine level of 94 mg/l, requiring haemodialysis in 52.9% of cases. Positive proteinuria was found in 25 patients, 12 of whom were nephrotic. Kidney biopsies were performed in 24 patients, revealing myeloma-cell nephropathy in 16 and AL amyloidosis in 8. Renal involvement in MM takes several forms and affects prognosis and management.

18. Patterns of biopsy-proven kidney disease in the Eastern Cape, South Africa

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Introduction: There are minimal data on the biopsy-proven patterns of kidney disease from resource limited settings, particularly in Africa.

Methods: We conducted a retrospective interim analysis of 386 native kidney biopsies performed at Livingstone Hospital, Gqeberha, Eastern Cape Province, South Africa between 1 January 2012 to 30 December 2023. The study was approved by the University of Cape Town human research ethics committee (HREC 731/2014).

Results: The mean age was 34 years, 51% female. HIV prevalence was 28%. The frequencies of clinical indication for biopsy were acute kidney injury (26%), nephrotic syndrome (31%), nephritic syndrome (25%), chronic kidney disease (12%) and asymptomatic urinary abnormalities (6%). Of all biopsies analysed in this interim analysis (N=386), the main diagnostic categories included glomerulonephritis (72.5%), tubulointerstitial disease (15.0%), hypertension-related disease (8.8%) and end-stage kidney disease (2.8%). The most common overall histological pattern of injury was mesangiocapillary GN (n= 69) of which 55% were considered primary followed by membranous GN (n=41) of which 34% were considered primary. Secondary causes for mesangiocapillary and membranous GN included lupus nephritis (84% and 78% respectively) and HIV-related (9% and 11% respectively). Of those with GN (n=280), 190 (67.9%) were considered secondary. The most common overall causes for GN were as follows: Lupus nephritis (25.0%), HIV-related GN (15.4%), primary mesangiocapillary GN (11.1%), diabetic nephropathy (9.6%), primary focal segmental glomerulosclerosis (6.4%) and primary membranous GN (6.1%). IgA nephropathy accounted for only 3 (1%) of GN cases.

Conclusion: Infectious and autoimmune diseases are important causes of GN in our setting. Similar to other African biopsy cohorts, mesangiocapillary GN was the most common primary GN while IgA nephropathy remains rare.

19. Pharmacokinetics, clinical characteristics, and long-term outcomes in kidney transplant patients: a 10-year retrospective review

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Successful kidney transplantation depends on multiple factors, including the immune response to the allograft. Calcineurin inhibitors (CNIs) are important in achieving this immunosuppression, but wide variability exists between individuals' drug concentrations creating a double-edged sword for the clinician. Under-dosing leads to a significant risk of acute graft rejection but over-dosing increases the risks of unwanted side effects. Therapeutic drug monitoring is used to guide immunosuppressant dosing but relies on post-exposure measurements which predispose patients to significant risk of adverse reactions. Better approaches are needed to determine effective dosages of immunosuppressive agents before, or immediately after, kidney transplantation. This 10-year retrospective review of kidney transplant patients at Charlotte Maxeke Johannesburg Academic Hospital (CMJAH) focuses on the pharmacokinetics of CNIs cyclosporine and tacrolimus and their correlation with clinical outcomes. Drug blood concentrations at various time points post-transplantation, time-taken to achieve the target concentration, and factors such as gender, ethnicity, and donor type (living or cadaver) were analysed. The impact of antibody induction, smoking, and alcohol status on patients' pharmacokinetics and transplant outcomes were also investigated along with the correlation between pharmacokinetic parameters, biopsy proven acute rejection and chronic allograft dysfunction. Furthermore, we examined the incidence of hypertension and post-transplant diabetes mellitus, two common complications that can significantly affect patient prognosis. Our findings highlighted the significant pharmacokinetic variability among patients and probed the influence of individualized medication dosing to potentially reduce rejection rates. Our preliminary data indicates a possible link between these conditions and drug pharmacokinetics, underscoring the need for personalized therapeutic strategies.

20. Correlates of rapid progression in a retrospective ADPKD cohort in South Africa: preliminary results

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Introduction: Stratifying ADPKD patients according to their risk of disease progression is crucial. A few scoring systems exist but rely on MRI measurement of TKV and genetic analysis which are not easily accessible. Hence, we aimed to identify clinical predictors of progression.

Methods: We reviewed the electronic medical records of patients seen at the nephrology department of the Inkosi Albert Luthuli Central Hospital from 2002 to 2023. We are reporting on 57 patients with a proven diagnosis of ADPKD on ultrasound criteria. We extracted demographic, clinical, and paraclinical data. We divided the population into rapid progressors (ESKD before the age 50, reduction of eGFR > 5ml/min on measurements at least two years apart) and slow progressors. We performed logistic regression analysis to find any association with disease severity.

Results: We observed a female predominance (61.4%), with an average age at presentation of 45 ± 12 years. Black Africans and Indians were the most predominant racial groups. Kidney failure (38.6%) was the most common context for ADPKD diagnosis, followed by abdominal or flank pain (17.5%) and incidental imaging (14%). The prevalent complications were intracystic haemorrhage (26.3%) and haematuria (17.5%). The most frequent extra-renal manifestations were liver cysts (35.1%), followed by hernias (14%). Comorbidities included Type 2 Diabetes Mellitus (15.58%), dyslipidaemia (19.3%), and HIV (10%). A majority presented with ESKD at the first visit (43%) and the median eGFR at the first visit was 33 ml/min [2.51-121]. Follow-up duration ranged from 1 to 20 years. Logistic regression analysis indicated that ADPKD presenting with liver cysts increased the risk of haematuria, although this association was not statistically significant after adjusting for eGFR.

Conclusion: ADPKD patients with liver cyst involvement may face a greater risk of complications, such as haematuria, but disease progression does not seem to differ significantly from those with kidney cysts alone.

21. Pharmacotherapeutic profile and blood pressure control in hypertensive diabetic patients

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Introduction: The combination of hypertension and diabetes is common and contributes to an increased cardiovascular risk and acceleration of degenerative conditions. This underscores the importance of early detection and treatment of hypertension in diabetic patients.

Methods: A retrospective study was conducted on a cohort of patients with diabetic nephropathy and hypertension over a 10-year period. Demographic characteristics, antihypertensive treatments, and blood pressure (BP) measurements were collected. BP targets were defined according to ESC/ESH recommendations: BP < 130/80 mmHg for patients under 65 years old, < 140/80 mmHg for those aged between 65 and 79, and < 150/80 mmHg for patients over 80 years old.

Results: A total of 129 medical records were reviewed. The average age was 64.77 ± 10.8 years, with a gender ratio (M/F) of 1.22. Renin-angiotensin system blockers (RASB) were the most prescribed antihypertensives (71.4%). A combination of antihypertensive treatments was prescribed to 78% of patients. Among the 120 patients receiving combination therapy, 52% were on dual therapy, and 35% were on triple therapy. In monotherapy, angiotensin-converting enzyme inhibitors were the most prescribed (52.8%), followed by calcium channel blockers (33.3%). In dual therapy, the most common combination was a RASB and a calcium channel blocker (58.8%). After one year, 56.7% of patients achieved BP control. Among them, 34.6% had well-controlled hypertension from the start. The average systolic blood pressure in this group was 136.13 ± 18.9 mmHg, and the average diastolic blood pressure was 77.28 ± 10.46 mmHg.

Conclusion: The results highlight the importance of an integrated and individualized management approach to optimize the care of this high cardiovascular risk population.

22. Profile of patients with diabetic nephropathy at their first nephrology visit

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Introduction: Diabetic nephropathy (DN) is a serious complication of diabetes, significantly contributing to the rising incidence of chronic kidney disease globally. Early identification of patients at risk of developing this complication and understanding their clinical and demographic profiles are essential for better management.

Methods: We retrospectively analysed the medical records of patients newly diagnosed with DN over a 10-year period.

Results: One hundred and thirty-nine patients were included. The results showed that the majority of patients were male (56.11%) with a mean age of 64.64 ± 11.17 years, and a clear predominance of type 2 diabetes (96%). Family history was dominated by diabetes (59%) and hypertension (54%). The mean duration of diabetes was 15.89 ± 9.30 years. In terms of microvascular complications, 72.2% had diabetic retinopathy and 59.7% had diabetic neuropathy. In terms of macrovascular complications, 9.4% of patients had a history of stroke, 29.5% had coronary artery disease, and 18% had peripheral arterial disease. Sixty-four percent of patients had dyslipidemia, 16.5% had heart failure, and 92.8% of patients had hypertension.

Conclusion: This study highlights the importance of early identification of patients at risk of developing DN and the need for a multidisciplinary approach to prevent the progression of the disease.

23. Clinico-biological presentation of minimal change disease at the first consultation

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Introduction: Minimal change disease (MCD) is a notable cause of nephrotic syndrome in adults, although it is more frequently observed in children. In adults, it typically presents as a pure nephrotic syndrome, but criteria for impurity can also be observed.

Methods: A retrospective study was conducted in a nephrology department between 2015 and 2022. We included all patients who underwent a renal biopsy confirming the appearance of MCD. The analysed parameters included age, sex, blood pressure, serum creatinine levels, proteinuria, and immunological test results. This study aims to examine the clinical and biological presentations of adults with MCD at their first consultation, highlighting the particularities of this population.

Results: Nineteen patients were included, with a mean age of 35.74 ± 15.85 years and a gender ratio (M/F) of 1.11. One patient had a history of lymphoma and another was treated for pulmonary tuberculosis. Three patients (16%) had been followed since childhood for relapsing nephrotic syndrome. The most common presentation was nephrotic syndrome (84%), impure in 37.5% of cases by isolated hematuria (67%) or hematuria associated with renal failure (33%). Dyslipidemia was noted in all patients with nephrotic syndrome, with a mean cholesterol level of 9.2 ± 3.2 mmol/L and a mean triglyceride level of 2.64 ± 1 mmol/L. Optical microscopy revealed nephronic reduction of 5-15% in 6 patients and interstitial fibrosis and tubular atrophy of 10-20% in two patients.

Conclusion: MCD presents a classic clinical picture of pure nephrotic. Renal function generally remains preserved at this initial stage, highlighting the importance of early diagnosis and treatment.

24. Endovascular infections in a new haemodialysis unit

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Introduction: Central venous catheters (CVCs) are used to provide temporary access in haemodialysis. However, one of the most serious complications associated with these catheters is endovascular bacteraemia.

Methods: We conducted a retrospective and descriptive study over eight months from January 2023 to August 2023, which included all patients who received a jugular catheter in our unit.

Results: In our unit, 12 patients received a jugular catheter (KT). The average age of the patients was 58 years, with a male predominance (M/F sex ratio = 5). The reasons for catheter installation were the need to start haemodialysis sessions in urgent situations (7 cases), dysfunction of the vascular access (4 cases), and depletion of venous capital (1 case). The catheters had a lifespan of 52 days. During this period, three patients (25%) presented with infections, but none of them were endovascular in origin. The infections were an infection of the KT orifice (n=1) and bacteraemia (n=2). One patient developed infective endocarditis (IE). Staphylococcus aureus (SA) was identified in two cases, and Klebsiella pneumonia was identified in one case. The patients were initially treated with 1 gram of vancomycin three times a week and three doses of amikacin. One patient showed good clinical-biological progress, while the antibiotic for the patient with Klebsiella pneumonia bacteraemia was changed to tienam after the blood culture results. The patient with IE was transferred to cardiology where they received prolonged antibiotic therapy (vancomycin for 6 weeks) and showed good progress.

Conclusion: Endovascular infections are serious. The best therapeutic strategy is prevention through compliance with aseptic rules.

25. Sleep disorders in chronic haemodialysis patients

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Introduction: Sleep disorders associated with renal failure induce a significant decline in quality of life and are associated with an increase in cardiovascular morbidity and mortality in dialysis patients. Our work aimed to describe sleep disorders in haemodialysis patients.

Methods: We conducted a descriptive cross-sectional study during September 2023 at the haemodialysis unit of the nephrology department of Mongi Slim la Marsa Hospital. We conducted a survey based on the “ISI insomnia severity index” questionnaire. Moderate insomnia is defined by a score between (15-21) and severe insomnia by a score between (22-28)

Results: We collected 26 patients. The average age was 63.2 years (35-79 years). The sex ratio was 5.2 (21M/5F). The average duration of haemodialysis was 9 months. Insomnia was noted in 9 patients (34.6%). Five patients had moderate insomnia and 4 had severe insomnia. This insomnia concerned difficulty falling asleep in 4 patients, difficulty staying asleep in 3 patients, and early awakenings in 2 cases. Concerning the causes of this insomnia, we noted 2 cases of anxiety, 1 case of depression and 3 patients complained of chronic pain with restless leg syndrome. The disorders associated with this insomnia were daytime sleepiness in 3 cases and nightmares in 1 case. Regular use of hypnogens was noted in 7 patients.

Conclusion: Sleep disorders and in particular insomnia among chronic haemodialysis patients are common and multifactorial. Specific attention must be paid to them, including multidisciplinary care requiring regular and close collaboration between nephrologists, psychologists, and psychiatrists.

26. The contribution of transthoracic echocardiography in the detection of subclinical cardiac abnormalities in haemodialysis patients

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Introduction: Echocardiography is a reproducible non-invasive tool for screening and diagnosing subclinical cardiac dysfunction, vastly used for end-stage renal failure patients treated with haemodialysis.

Methods: The aim of the study was to identify subclinical cardiac anomalies detected by ultrasound, thus determining its place in cardiovascular risk assessment in chronic haemodialysis patients. This is a retrospective, cross-sectional, descriptive study, which was carried out in the nephrology department of the RABTA University Hospital in Tunis, including 55 patients undergoing regular intermittent haemodialysis. Sociodemographic variables, history of cardiovascular disease, biological parameters and cardiac ultrasound data were analysed.

Results: The study population consisted of 40 men and 15 women (SR: 2.6) of an average age of 53 years. Risk factors most frequently identified: hypertension (76.3%), diabetes (58.2%), underlying heart disease present at the start of haemodialysis (25.4%). Anaemia was found in 78.2% of patients, while secondary hyperparathyroidism was noted in 60%. 1 patient had hypoalbuminemia. The underlying nephropathy was, in order of frequency: diabetic (34%), chronic interstitial tubular (28.6%), indeterminate (11%), chronic glomerular (11%), and hypertensive (8.6%). Only 34 of those patients (62%) underwent two cardiac ultrasounds 1 year apart. The main lesions identified were:

Left ventricular hypertrophy (LVH): 62.8%: 48.6% of patients already had LVH which remained stable afterwards, 14% developed it de novo.

Cavity dilation: de novo atrial (28.6%), ventricular (6%), and atrioventricular (1 patient) dilation. However: two cases of underlying atrial dilations and one underlying ventricular dilation were not found one year after.

Heart valve disorders: 34.3% of dialysis patients in the study had pre-existing valvular insufficiency, and of these, we noted improvement in 50%, stability in 16% and worsening in 33%. Data collection after a year identified 7 new cases (20%) of valve regurgitation, and 2 new cases (5.7%) of valve narrowing.

Hypokinesia: 13 patients (37%), 8 of which developed the hypokinesia secondarily. Pericardial effusion: 2 cases, with total resorption at 1 year.

Diastolic dysfunction: 5 cases, not found at 1 year.

Conclusion: Although operator-dependent, cardiac ultrasound remains an important tool for detecting subclinical cardiac dysfunction, allowing for early and appropriate care in end-stage renal failure patients treated with intermittent haemodialysis.

Abstracts presented on 19 October 2024

Oral abstracts

27. Incidence, risk factors, and outcomes associated with pregnancy-related acute kidney injury in Northwest Nigeria

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Introduction: Although largely preventable, pregnancy-related acute kidney (PRAKI) continues to be a significant contributor to maternal and perinatal mortality in low- and middle-income countries. Data are scarce on the incidence and impact of PRAKI in Nigeria. Thus, this study aimed to evaluate the incidence, risk factors, and maternal-foetal outcomes of patients with PRAKI.

Methods: This is a prospective multicentre study conducted among 841 women at the Obstetrics and Gynaecology units of two large referral hospitals in urban Kano, Nigeria, between 1st October to 30th March 2023. We employed multivariate logistic regression analysis to determine independent predictors of PRAKI in this resource-constrained setting.

Results: The mean age ± standard deviation (SD) of respondents was 27.8 ± 6.7 years. The prevalence of PRAKI was 11.4%, with the majority (55.2%) being in KDIGO stage 1. The most common risk factors for PRAKI were pre-eclampsia (24%), postpartum haemorrhage (16.7%), sepsis (15.6%), and eclampsia (14.6%). The overall maternal and perinatal mortality rates were 7.4 % and 21.9 %, respectively. PRAKI was independently associated with the use of traditional medications (adjusted odds ratio, aOR =1.94; 95% CI 1.18 - 3.18), history of pregnancy-induced hypertension (aOR = 2.61; 95% CI 1.49 - 4.59), an established diagnosis of hypertension (aOR = 2.53; 95% CI 1.42 - 4.50), and advanced maternal age (aOR = 0.50; 95% CI 0.27 - 0.92, ≥35 years vs. 18 - 24 years).

Conclusion: PRAKI is common in women presenting for care in our setting and is associated with significant maternal and perinatal mortality. The important risk factors for development of PRAKI in our study population include hypertensive disorders of pregnancy, established diagnosis of hypertension, postpartum haemorrhage, and sepsis.

28. Shared decision making and patient educational resources in anaemia of chronic kidney disease

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Introduction: Shared decision making (SDM) could enhance the quality of treatment decisions and adherence for patients with chronic diseases. We evaluated treatment-related SDM in patients with anaemia of chronic kidney disease (CKD) and their physicians.

Methods: Physicians used retrospective data to capture the clinical characteristics of adult patients with anaemia of CKD. Both physicians and patients completed a questionnaire about SDM and the availability of patient educational resources. Physicians were practicing nephrologists in Egypt, Saudi Arabia, South Africa, or Türkiye with ≥1 year of experience. Patients had been diagnosed with stage 3–5 CKD (2018–2020), and had haemoglobin levels <13 g/dL (males) or <12 g/dL (females), and ferritin levels ≤500 ng/mL at diagnosis.

Results: A total of 217 physicians and 766 patients were surveyed. Most physicians (71.4%) and patients (79.0%) reported that treatment options were discussed together, and the physician made the final decision. A smaller proportion of patients (12.7%) reported that the physician made treatment decisions with no discussion, and 13.8% of physicians reported no/minimal discussion about treatment decisions with their patients. The greatest barriers for physicians in discussing disease management with patients were paucity of educational resources (55.3%), infrequent consultations (49.3%), and lack of time during consultations (37.8%). Both physicians (65.4%) and patients (52.1%) preferred information leaflets to other sources of patient education. Preferences for particular educational resources largely aligned with those available, but there was a notable lack of disease-specific patient advocacy groups and medical websites. Over 20% of patients reported never receiving educational resources.

Conclusion: Most patients with anaemia of CKD and their physicians discussed treatment options together, and physicians made the final treatment decisions. Communication during consultations could be improved by developing educational resources that meet the needs of both physicians and patients.

29. The impact of pre-eclampsia on kidney function in a low resource setting in South Africa

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Introduction: Pre-eclampsia affects 10-15% of pregnancies. High-income countries have shown significant, sustained hypertension, heart disease, and kidney failure following pre-eclampsia. There is limited data on the long-term health sequelae in low and middle-income countries, this study aimed to evaluate the impact of pre-eclampsia in South Africa.

Methods: This observational cohort study was conducted at Groote Schuur Hospital, Cape Town, South Africa. Women with pre-eclampsia who attended the post-partum hypertension service (PPHS) from January 2020 to September 2023 were included. Demographics, genetic variation, clinical parameters, and patient and kidney survival were assessed.

Results: 195 women visited the PPHS. The mean age was 29.1±6.72 years, the median BMI was 31 kg/m2 (IQR 26-35) and 2/3rds (67%) underwent a caesarean section. Severe pre-eclampsia (with HELLP syndrome) occurred in 30% and acute kidney injury (AKI) in 35%. The majority (75.2%) were discharged on antihypertensives. The mean gestational age at delivery was 33±4.4 weeks. Persistent hypertension was observed in 38%, 45%, 38%, and 24% of women at 3, 6, 12, and 24 months postpartum, respectively. At 3, 12, and 24 months, 60%, 28%, and 33% had the combined outcome of an eGFR<90 ml/min/m2 and a UACR >3 mg/mmol. The proportion of treated women with hypertension increased over two years, while the average blood pressure declined.

Conclusion: A third of women had AKI during pregnancy. Persistent hypertension was high and sustained microalbuminuria was significant. This underscores the importance of adequate postpartum management to prevent chronic kidney disease.

30. Clinical and histopathological findings in HIV-positive to HIV-positive kidney transplant recipients

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Introduction: The spectrum of histological findings in transplanted kidneys from HIV-positive donors to HIV-positive recipients is relatively unexplored. This study describes the type and timing of histological diagnoses observed in this unique cohort.

Methods: Adequate biopsies were analysed at implantation and post-transplant between September 2008 and May 2022. Histological disease spectrum, distributions over time and relevant clinical characteristics and management were reported for both for-cause and protocol biopsies.

Results: Twenty-four implantation biopsies from 31 recipients and 179 allograft biopsies (100 for-cause, 79 protocol) from 50 recipients were analyzed. Most rejection episodes occurred in the first year post-transplant. Eighteen (36%) recipients had at least one episode of biopsy-confirmed acute/chronic T-cell mediated rejection (TCMR) or active antibody mediated rejection (ABMR), all found in for-cause biopsies. Sixteen (32%) had one or more episodes of borderline TCMR in both for-cause and protocol biopsies. Common non-rejection diagnoses were interstitial fibrosis and tubular atrophy, ascending pyelonephritis, and calcineurin-inhibitor toxicity. Three recipients had biopsies diagnostic of classic HIVAN, and four had features suggestive of HIVAN. ABMR most adversely affected kidney function and significantly contributed to graft failure.

Conclusion: The histological findings in this cohort of HIV-positive kidney transplant recipients who received grafts from unmatched HIV positive donors revealed a spectrum of abnormalities. Protocol biopsies added to surveillance on borderline rejection and HIVAN however were not informative for confirmed rejection. Confirmed rejection occurred in 18 (36% of recipients). Understanding the factors contributing to this may assist optimization of immunosuppressive protocols in the future.

31. Presentation and response to plasma exchange of thrombotic thrombocytopenic purpura in a community with high HIV prevalence

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Introduction: Thrombotic thrombocytopenia purpura (TTP) is a rare disorder which if untreated carries a high mortality. HIV is an important cause of TTP in the local context but remains poorly characterized; increased mortality risk has been suggested by some. Previous South African literature has suggested acceptable rates of remission with plasma infusion therapy, but the efficacy of plasma exchange (PEX) remains largely unreported. We therefore sought to compare the presentation and response to plasma exchange (PEX) between HIV-positive and HIV-negative patients diagnosed with TTP at our institution.

Methods: A retrospective review of 83 patients receiving PEX for TTP between 1/1/2010 – 31/12/2019 was undertaken. Demographics and presenting parameters were compared between HIV-associated TTP and other aetiologies using Mann Whitney U and Kruskal Wallis ANOVA testing, as appropriate. The effect of aetiology and presenting parameters on PEX duration was modelled using Cox proportional hazards; effect of these variables on mortality and residual renal dysfunction in survivors was analysed using stepwise multivariate regression.

Results: Uncontrolled HIV infection was the commonest cause of TTP in this series. Thrombocytopaenia was more severe and neurological deficit more frequent in HIV-associated TTP; renal dysfunction was milder in this group. Aetiology did not influence mortality risk. Aetiological category and presenting parameters did not predict PEX duration. Residual renal dysfunction was less frequent in survivors of HIV-associated TTP than in HIV-negative patients.

Conclusion: HIV is an important cause of TTP in the local context. Haematological and neurological involvement are more severe in HIV-associated TTP. Acceptable survival rates are achievable with PEX even in advanced HIV infection; renal sequalae are less common in this group.

32. Burnout in South African dialysis nurse practitioners - effect of workplace experience and the COVID-19 pandemic

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Introduction: Provision of dialysis to kidney failure patients relies on skilled dialysis nurse practitioners (DNPs). Workplace stressors in the resource-limited state sector and the recent COVID-19 pandemic have increased burnout in other nursing specialities; little is known of their effect on DNPs. We here report the first analysis of burnout in South African state DNPs.

Methods: Sixty-four anonymous volunteers (69% of state DNPs in Johannesburg) were recruited. Burnout was assessed using the Maslach Burnout Inventory – Human Services Survey (MBI-HSS), respondents additionally completed surveys analysing workplace and COVID-19 experience. The effect of respondent demographics, workplace, and COVID-19 experience on burnout was determined using regression modelling.

Results: MBI-HSS defined burnout occurred in 21.9%. Workplace challenges were reported by 96.8%, with lack of sufficient staff (96.8%), insufficient pay (75%), and perceived lack of management support (69.8%) being frequent. Only 27.4% felt that patients were understanding of challenges; 46.9% reported feeling supported by medical colleagues. Sixty-four percent reported deteriorated career perception following the COVID-19 pandemic; increased absenteeism (92.1%), personal health concerns (90.6%), higher patient numbers (88.9%), and increased patient deaths (87.5%) were factors. Younger age (ß -0.29 ± 0.12, P = 0.015), longer time in current portfolio (ß 0.38 ± 0.15, P = 0.012), lack of management support (ß 2.76 ± 0.93, P = 0.003), and deteriorated career perception following COVID-19 (ß 3.68 ± 0.91, P < 0.001) increased emotional exhaustion; inadequate pay reduced personal accomplishment (ß -1.12 ± 0.54, P = 0.036). Deterioration in career perception following COVID-19 independently increased burnout (OR 2.07, 95% CI 1.06 – 4.06, P = 0.033).

Conclusion: Burnout rates in South African DNPs exceed that reported in other regions. Inadequate remuneration and poor management support are important factors in burnout. The COVID-19 pandemic continues to exert a significant effect on career appraisal and thus on burnout in these practitioners.

33. Outcomes of adult kidney transplant recipients at Charlotte Maxeke Johannesburg Academic Hospital between 1 January 2012 and 31 January 2020

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Introduction: In end stage kidney disease patients kidney transplantation provides a survival benefit over long term dialysis. Kidney transplantation is complex, and outcomes are dependent on several donor and recipient factors.

Methods: This study was a single centre retrospective record review of all first-time adult renal transplant recipients from 01 January 2012 to 31 January 2020. Data collected included demographic and clinical parameters. Complications post transplantation were noted. Outcome end points were recipient death and graft loss (defined by the need to return to dialysis).

Results: 167 patients over the age of 18 years received renal transplants at our centre between 1 January 2012 and 31 January 2020, 140 patients were included, of which 94 (67.1%) were male and 46 (32.9%) female. Mean age at time of transplant was 41.9 ± 10.5 years. 10 (7.1%) were living with HIV. 128 (91.4%) received a cadaveric transplant and 12 (8.6%) received a living donor transplant. 63 (45.0%) patients experienced delayed graft function, of which 45 (71.0%) required dialysis support. Median time to discharge was 18 days (IQR 11-32 days). Within the first 3 months post-transplant 95 (67.9%) patients were readmitted, 20 (14.3%) for urosepsis. 7 (5%) recipients developed a malignancy. 39 (27.9%) recipients developed new onset diabetes after transplantation. 48 (34.3%) patients experienced graft loss with a median time to loss of 30.5 months (IQR 10.5-52 months). During the 8-year period 40 patients (28.6%) demised, 16 (40%) of these patients had concomitant graft loss.

Conclusion: Whilst 65% of recipients had a functioning graft at 3 years, further studies are required to determine factors influencing long term graft outcomes in our population.

34. Diabetic nephropathy induced impaired aortic function is not mediated by mean arterial pressure and its determinants

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Introduction: Impaired aortic function is a core mechanism in the development of uremic cardiomyopathy. Herein, we investigated whether mean arterial pressure and its determinants including systemic vascular resistance (SVR) and cardiac output (CO) mediate the impact of diabetic nephropathy (DNP) and hypertensive nephropathy (HNP) on aortic function.

Methods: This multi-ethnic study included 67 non-dialysis and 48 dialysis patients. Aortic function measures comprised PP, SBP, central pulse pressure, central systolic blood pressure, proximal aortic stiffness as estimated by the inverse of total arterial compliance (invTAC), carotid-femoral pulse wave velocity, backward wave pressure and forward wave pressure. The calculated power of the study was 0.997 based on $\alpha = 0.05$.

Results: HNP (53.9%), DNP (32.2%), glomerulonephritis (19.1%) and HIV associated nephropathy (7.8%) comprised the major CKD aetiologies. Concurrent HNP and DNP was present in 31.1% of the patients. Patients with compared to without concurrent HNP and DNP experienced more frequent cardiovascular disease (43.2% versus 14.9%, $p = 0.01$) and impaired aortic function ($P = 0.006$ - 0.05 for 5 of the measures). DNP was independently associated with each aortic function measure ($P < 0.001$ - 0.02). HNP was not directly related to aortic function ($P > 0.05$). Other covariates that were consistently associated with impaired aortic function measures except for invTAC, included MAP ($P < 0.001$ - 0.01) and its determinants. MAP and CO x SVR did not account for the potential effect of DNP on any aortic function measure (0.02-(-)7.3%). Dialysis status did not impact any of the identified relationships (interaction $P > 0.05$).

Conclusion: This study suggests that reducing MAP by decreasing volume overload and/or SVR through fluid intake restriction, diuretic therapy and antihypertensive agents or vasodilators may improve aortic function in the overall CKD population. However, these interventions are unlikely to reverse impaired aortic function that is induced by DNP. Whether increased arterial medial calcification associated with diabetes and DNP explain our findings merits further study.

35. Differential responses to adenine-induced chronic kidney disease in WKY and SHR Models

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Introduction: This study delineates the distinct cardiovascular outcomes associated with CKD only versus CKD with concurrent hypertension. We induced CKD in Wistar Kyoto rats (WKYs), a model of lone CKD, and Spontaneously Hypertensive Rats (SHRs), a model of CKD with comorbid hypertension.

Methods: Both WKY and SHR were divided into control and adenine-treated subgroups. Adenine supplemented diet was administered for 8 weeks. At termination, under anaesthesia, a catheter was inserted into the carotid artery to measure central pressures and echocardiography was performed to assess cardiac function. Pulsepenlab was used to determine aortic function. Blood samples were collected via cardiac puncture.

Results: The urea concentration was larger in SHR-treated rats compared to those in other groups ($P = 0.028$). Central systolic blood pressure ($P < 0.001$), pulse pressure ($P < 0.02$) and mean arterial pressure ($P < 0.001$) were larger in SHR and SHR-treated groups compared to the WKY and WKY-treated groups. The SHR-treated group had a larger pulse pressure compared to the WKY-treated group ($P = 0.02$). Forward wave pressure ($P < 0.002$), augmentation index ($P = 0.006$) and augmented pressure ($P = 0.004$) were increased in SHR-treated compared to WKY and WKY-treated groups. Left ventricular mass adjusted to body weight was higher in the SHR treated ($P = 0.01$) compared to other groups. Right kidney mass adjusted for body weight was larger in the SHR-treated group than in the SHR ($P = 0.0004$) and WKY control groups ($P = 0.002$). The WKY-treated group also had heavier right sided kidneys than the WKY control group. Left kidney mass adjusted for body weight was larger in the SHR-treated group than in the WKY ($P = 0.0002$) and the SHR control groups ($P = 0.006$).

Conclusion: SHRs experience a greater susceptibility to adenine-induced kidney impairment than WKYs. Adenine-induced decreased kidney function causes more impaired aortic function, left ventricular mass and kidney weight in SHRs than in WKYs.

36. Review of first use of Carpe Diem dialysis machine in Africa for paediatric acute kidney injury

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Introduction: Dialysis in small children for acute kidney injury (AKI) is challenging and in our setting, we practice 'Peritoneal Dialysis (PD) First for paediatric AKI'. In recent years however, advances in technology of both haemodialysis/filtration machines together with small calibre dialysis lines have allowed for haemodiafiltration to be possible. Describe our experience in Cape Town, South Africa with Carpe Diem machine (CArdio Renal PEDIatric Emergency Machine) the first such machine used in Africa.

Methods: Audit of use of Carpe Diem Machine for paediatric AKI June 2019 – 2023 at Red Cross War Memorial Children's Hospital (RCWMCH).

Results:

Number of cases	15
Weight of patients	1.7 – 8kg
Age	2 days – 25 months
Diagnosis in cases needing KRT	Open abdomen 5 Post operative cardiac surgery 4 Metabolic conditions 3 Tumour lysis syndrome 1 Iron toxicity 1 Nephrotic syndrome 1
Duration of dialysis	9 hours to 6 days
Type of haemodialysis catheter used	Arrow 5Fr 5cm length 12cases Gamcath 6.5Fr 3 cases (1 conversion from 5Fr to 6.5Fr
Size of Carpe Diem circuit used (Surface area in m^2)	0.15m^2 11 cases 0.25m^2 3 cases 0.075m^2 2 cases
Costs of dialysis per day(excluding machine costs) in Cape Town	KRT Carpe Diem USD 370 KRT Multifiltrate Fresenius USD 195 Acute HD USD 120 Automated cycling PD machine USD 186 Manual PD(Fresenius PD paed set & Cook catheter USD 135 Manual PD improvised using adult CVP line USD 26
Survival	10/15 came off dialysis – 4 cases were withdrawn due to futility and 1 case died while on the machine Later 4/10 died later once off dialysis but due to significant illness Overall, 6/15(40%) survived long term

Conclusion: Despite us having a PD First policy, there is a role for the Carpe Diem machine in small infants in countries where it is available or affordable for those patients where PD is not possible (predominantly open abdomen or chests post-surgery). Our survival rate with this device is less than our overall dialysis survival recently published and reflects the challenges in providing KRT in small and critically ill infants.

37. Registry review of kidney replacement therapy for children in South Africa

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Introduction: The South African Renal Registry (SARR) collects and reports data on adults and children with kidney failure undergoing kidney replacement therapy (KRT) in the public and private healthcare sectors from all nine South African provinces. Annual updates capture and record the type of modality as at 31st December each year and any switch in treatment modality and the dates and reasons for stopping treatment are also recorded. Aim: To describe the state of KRT for children in South Africa from 1st January 2013 to 31st December 2022.

Methods: We analysed the South African Renal Registry data to provide information on the incidence, treatment modalities, factors affecting the type of KRT modality and outcome. The data was exported from the SARR database on 10/11/2023 into Microsoft Excel and analysed using SPSS

Results: 361 children £18 years started KRT between 1st January 2013 to 31st December 2022 of which 338 were alive at 1 year. The average incidence rate was 1.7 per million population (pmp). The median age was 14 years, 52.4% were male and 58.4% were black. The main primary kidney disease was glomerular diseases (42.1%) followed by chronic kidney disease (CKD) unknown cause. Kidney transplant was not done in children under 1 year. Children aged between 13-18 had almost 80% less chance of receiving a transplant than children aged 1-5 (OR 0.22, $P < 0.001$). There was clear inequity in the access to transplants between provinces with transplant available in only 5/9 provinces. White patients had 8 times more chance of receiving a transplant (OR -8.30, 95%CI 4.27 - 16.15; $P < 0.001$) and the coloured patients had 3 times more chance of receiving a transplant (OR-3.36, 95%CI -1.93 – 5.85; $P < 0.001$) than black patients. These discrepancies persisted despite controlling for the province of origin, age of onset and sector of healthcare. The children who received a transplant had the highest survival rates.

Conclusion: The incidence of children starting KRT in South Africa is low compared to other well-resourced countries. There is clear inequality in access to transplant due to geographic location and demographics.

38. Treatment of Tuberous Sclerosis Complex with Everolimus- a case report and review

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Tuberosclerosis complex is a genetic disorder resulting in multiple benign hamartomatous tumours in different parts of the body. It is an autosomal dominant genetic disorder affecting the mTOR pathway which controls cellular growth and metabolism. This patient had multiple large renal tumours and a history of macroscopic haematuria. This case report presents the response to treatment with the mTOR inhibitor everolimus over a 2-year period and includes a brief review of the literature.

39. Podocytopathies associated with secondary polycythaemia: a case series review

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An unusual manifestation of nephrotic syndrome is its rare connection with secondary polycythaemia. Secondary polycythaemia exhibits a limited correlation with parenchymal renal diseases and is primarily associated with conditions involving increased renal mass, such as renal tumours, polycystic kidney disease, hydronephrosis, or disorders with renal hypoxia like renal artery stenosis and following renal transplantation. However, a few case reports have been published regarding an association of polycythaemia with nephrotic syndrome (NS), but no conclusive pathogenesis has been elucidated.

We present three patients with focal segmental glomerulosclerosis (FSGS) and persistent polycythaemia requiring routine venesection. Their polycythaemia was characterized by normal serum erythropoietin levels, which excluded polycythaemia vera and primary familial and congenital polycythaemia. These individuals also had a negative workup for other secondary causes. After reviewing the literature, we postulate that this may be associated with increased sensitivity to erythropoietin. Additionally, we review the relationship between polycythaemia vera-associated haemodynamic alterations and their potential role in the development of FSGS.

These cases underscore the importance of recognizing less common causes of secondary polycythaemia in patients with NS and the necessity for thorough investigation to ensure timely and effective treatment. Future research should focus on further elucidating the pathophysiological mechanisms linking NS and polycythaemia and developing standardized protocols for diagnosis and management.

40. The prevalence and severity of the symptom burden in patients with end stage renal disease (ESRD) in a resource limited setting

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Introduction: Globally, kidney failure is Increasing. In South Africa, limited access to kidney replacement therapy (KRT) necessitates urgent improvement in kidney supportive and palliative care.

Methods: This prospective, cross-sectional, mixed-method study was conducted at two Cape Town hospitals from June 2021 to June 2023. Participants with end-stage kidney failure (n=75) were categorized into three groups: receiving dialysis, on the waiting list, and ineligible for state-funded KRT (category 3). Data collection included demographics, comorbidities, and social circumstances. The iPOS-renal questionnaire assessed symptom burden, complemented by qualitative insights from open-ended interviews, which underwent thematic analysis.

Results: The cohort was young, with a median age of 40 (33-45) years, and faced significant poverty, commonly experiencing weakness/lack of energy (64%). Patients on the waiting list and those in category 3 had a higher symptom burden. Category 3 patients had the highest prevalence of shortness of breath ($P = 0.006$), dry mouth ($P < 0.001$), poor mobility ($P = 0.007$), and restless legs ($P = 0.038$). Emotional symptoms were prevalent across all groups. Category 3 patients experienced the most severe physical symptoms, including shortness of breath ($P = 0.003$), sore/dry mouth ($P < 0.001$), drowsiness ($P = 0.028$), and poor mobility ($P < 0.001$). They also experienced the highest levels of personal anxiety ($P < 0.001$), family anxiety ($P = 0.037$), and appointment time wastage ($P = 0.021$). Qualitative findings highlighted concerns for families, fears about unfulfilled lives, and the need for better access to information.

Conclusion: Limited literature exists on symptom burden in conservative kidney care with dialysis rationing. Recommendations advocate early multidisciplinary team involvement, improved patient and family support, and enhanced palliative care training.

41. A comparison of the efficacy of laxatives versus sodium polystyrene sulfonate for the treatment of hyperkalaemia in hospitalised patients: a post-hoc analysis

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Introduction: Hyperkalaemia is a common electrolyte disorder in hospitalised patients and is associated with life-threatening complications. Sodium polystyrene sulfonate (SPS) is frequently used to increase gastrointestinal losses. There is limited data comparing the efficacy of SPS to laxatives alone in reducing serum potassium in hospitalised patients.

Methods: We performed a retrospective cohort study of adult hospitalised patients with hyperkalaemia ([K+] ≥5.5 mmol/L) treated with either laxatives alone (L), SPS alone (S), or laxatives plus SPS (LS) from 1 January 2019 to 31 December 2019. Patients undergoing dialysis were excluded. We compared the efficacy of lowering [K+] among these three groups over the first 24 hours and 2–7 days. Multilinear regression was performed to identify predictors of absolute [K+] reduction within these timeframes and 30-day survival analysis was performed.

Results: A total of 134 patients were included, with 30% receiving laxatives alone, 53% SPS alone, and 17% laxatives plus SPS. There were no differences in age, sex, or comorbidities among the groups; however, all patients in the LS group had kidney dysfunction ($P < 0.001$). Baseline [K+] was highest in the LS group (6.0 mmol/L (L) vs. 6.4 mmol/L (S) vs. 7.2 mmol/L (LS), $P = 0.003$). There were no differences in [K+] at 24 hours ($P = 0.146$) or 2–7 days ($P = 0.610$); however, the absolute reduction in [K+] at 2–7 days was greater in the LS group (-0.9 mmol/L (L) vs. -1.36 mmol/L (S) vs. -1.75 mmol/L (LS), $P = 0.039$). On multilinear regression, the LS group was associated with a greater absolute reduction in [K+] at 2–7 days. There were no differences in 30-day survival ($P = 0.099$).

Conclusion: In hospitalised patients with hyperkalaemia, the combination of laxatives plus SPS was more effective in reducing [K+] at 2–7 days, though there was no difference in 30-day survival.

42. Demographics, aetiologies, and comorbidities of inpatient referrals to specialist nephrology services at a state institution over a 12-month period

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Introduction: While progress has been made in describing the aetiology and patient profile of chronic kidney disease (CKD) and acute kidney injury (AKI), an overall picture of these disease entities and their referral patterns is lacking. Understanding kidney disease patterns among inpatient referrals is required to improve resource allocation in the constrained state sector. We therefore reviewed all inpatient referrals at our institution over a 12-month period.

Methods: Anonymized data was extracted from the clinical records of 963 patients comprising 1179 inpatient referrals over the period 1/2/2023 – 28/2/2024. Patient demographics, comorbidities, referral patterns, and ascribed kidney disease aetiology were described for the series.

Results: Males contributed the preponderance of referrals (54.9%); the mean age at referral was 49 ± 15.8 years. Hypertension (61.5%) and HIV (32.9%) were significant comorbidities; diabetics comprised 25% of referrals. Most referrals were received from General Medicine (56.9%) followed by General Surgery (10.1%); Nephrology admissions comprised 25.3% of inpatients. Acute kidney injury (AKI) was the most frequent reason for referral (32.2%), with sepsis / infection-related AKI being the commonest cause of AKI (37.9%); nephrotoxins / intoxications or poisonings and dehydration contributed 18.5% and 16.3% of AKI episodes, respectively. Chronic kidney disease (CKD) patients comprised 27.3% of referrals; the majority (71.8%) of these referrals being CKD stage G5. Complications of dialysis comprised 18.5% of patient admissions; access failure (33.6% of dialysis admissions), access infections (22.9%), and overload (20%) contributed the majority of these admissions. Glomerular disease contributed 11.9% of referrals; nephrotic syndrome formed the majority of these cases (87.5%).

Conclusion: Kidney disease affects younger patients in our setting. Acute kidney injury due to sepsis / infectious causes places significant demand on state nephrology services; referral with advanced CKD is frequent amongst inpatients. Capacitation of hospitalists and primary care workers is required to ameliorate strain on renal services.

43. Status of transplantation in Africa: a preliminary report from the AFRAN Transplantation Survey

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Introduction: Kidney transplantation (KT) is the preferred form of kidney replacement therapy. Literature suggests that KT remains limited in Africa, but an overview of transplantation on the continent is lacking. The AFRAN Transplantation Committee here reports preliminary findings from the first comprehensive survey of KT practice amongst African nephrologists.

Methods: An on-line anonymized survey was completed by 275 voluntary respondents representing 38 countries recruited using snowball sampling. KT practice, patient access to KT, and experience of transplant trafficking / tourism were described.

Results: 65.5% of respondents were active in transplantation, with a mean of 10.0 ± 7.9 years' experience. Respondent involvement in KT varied between recipient evaluation (RE, 91.7%), donor evaluation (DE, 88.3%), recipient follow-up (RF, 84.4%), donor follow-up (DF, 66.7%) and peri engraftment management (21.1%). A median of 10 recipients were under follow-up care (interquartile range 4 – 30). KT was accessible to 68.2% of respondents' patients. Programme capability varied between RE (91.4%), DE (89.8%), RF (87.2%), and DF (81.3%). 25.1% of respondents reported patient access to a deceased donor (DD) programme; non-related living donation (NRLD) was accessible to 33.1% of respondents' patients. 91.2% of respondents referred patients for engraftment within their home country, 59.0% reported local centre engraftment capability. A minority (15.2%) of programmes were fully state funded; a mixed funding model was employed in 50.3%. Experience of organ trafficking or transplant tourism was reported by 20% and 30% of respondents, respectively.

Conclusion: Progress is being made in transplantation capability in Africa with a significant proportion of nephrologists being involved in KT or having access to a local programme with comprehensive services. Funding remains a significant limitation which likely accounts for the small number of recipients under follow-up and may contribute to transplant tourism / trafficking. Lack of response from some countries raises concern over KT access in all AFRAN regions.

44. Cutaneous malakoplakia in a kidney transplant recipient: a case report

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Malakoplakia is a very rare granulomatous condition resulting from defective lysosomal clearance of intracellular bacteria by macrophages. Cutaneous malakoplakia is considerably rarer. As reported it is far more prevalent in immunocompromised patients and it can affect many organs but is more common in the urogenital tract. We report a case of cutaneous malakoplakia in a kidney transplant patient who had buttock lesion clinically suspicious for necrobiosis lipoidica diabeticorum, and initially thought to be possible cutaneous cryptococcosis on histology, but pathologically proven to be malakoplakia. Case: A 56-year-old male with end-stage kidney disease due to malignant hypertension. He had been on haemodialysis since 09/2016. He received a DCD-transplant in 11/2021 at our institution which was complicated with delayed graft function due to ATN. His maintenance immunosuppression included tacrolimus 5mg bd with trough levels maintained in the therapeutic range, Azathioprine 125mg daily, and prednisone 5mg daily. Baseline creatinine was stable at around 140 µmol/L. The patient presented to the transplant clinic with (Left) buttock lesion extending to the anus, no skin pus or abscess that looked drainable. Vitals at the clinic were within normal limits and systemic physical examination was unremarkable. The wound was cleaned and dressed at the clinic. Despite care and dressing the patient came back to the clinic after 2 weeks with the lesion worsening. Initially, the surgeons queried necrobiosis lipoidica diabeticorum. Skin biopsy was done. The provisional skin biopsy findings were thought to be compatible with cryptococosis. After further histochemical staining, PAS stain showed positive-staining in what was described as Michealis-Gutmann-bodies, and the Von-Kossa stain showed Calcium phosphate in these M-G bodies. Histopathological findings confirmed the diagnosis of malakoplakia. The patient was treated with long-term trimethoprim/sulfamethoxazole and his Azathioprine was stopped. He has improved with antibiotic therapy and is currently following up in the transplant clinic.

45. Association of diabetes and dyslipidemia in hypertensive patients in nephrology consultation: prevalence and cardiovascular complications

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Introduction: Diabetes, dyslipidaemia and hypertension are increasing in prevalence worldwide and they are among the most cardiovascular factors. The aim of this work was to know the cardiovascular complications found in hypertensive patients with diabetes and dyslipidaemia followed in nephrology consultation.

Methods: We conducted a descriptive retrospective study over a period of two years (January 2020-January 2022) including hypertensive patients aged over 18 years followed in nephrology consultation. Cardiovascular risk was estimated by calculating the Framingham score. The stage of chronic kidney disease (CKD) was defined according to the KDIGO 2012 classification

Results: Our study included 73 patients followed for hypertension associated or not with nephropathy. The mean age was 69.62+/-9.59 [30-96] with a sex ratio M/F = 1.35. Diabetic patients were 44 and dyslipidaemic patients were 25. Diabetes associated with dyslipidaemia were found in 21 patients (28.76%). Diabetic nephropathy was found in 32 patients (72.72%). The average Framingham score was (22.94%) and (21.52%) in diabetic and dyslipidaemic patients respectively. Obesity was found in 15 patients of our population (20.54%), of which, 12 patients were diabetic (80%) and 7 patients were dyslipidaemic (46.66%). Coronary artery disease was found in 14 patients in our population (19.17%) of whom 8 were diabetic (57.14%) and 3 were dyslipidaemic (21.42%). Heart failure was found in 8 patients, 6 of whom were diabetic (75%) and 3 of whom were dyslipidaemic (37.5%). Six patients in our population had a stroke (8.21%), 5 of whom were diabetic (83.33%) and 2 were dyslipidaemic (33.33%). Regarding the renal impact, we noted the presence of chronic kidney disease stage 3 or more in 55 patients (75.34%) among which 19 patients had dyslipidaemia (34.54%).

Conclusion: We noted a multitude of cardiovascular events in patients with diabetes and/or dyslipidaemia associated with hypertension. Early identification and management of these risk factors are necessary to prevent cardiovascular complications.

46. Profile of elderly hypertensive patients in nephrology consultation: about 61 cases

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Introduction: Hypertension is a cardiovascular risk factor and a cause of morbidity and mortality, especially in elderly population. The aim of this work was studying the profile of elderly hypertensive patients, the associated risk factors and the proposed therapeutic modalities.

Methods: It was a retrospective descriptive study conducted in nephrology consultation from January 2020 to January 2022. Hypertensive patients over 65 years were included. Cardiovascular risk was stratified according to the ESC2019 recommendations. Chronic kidney disease (CKD) stage was defined according to the KDIGO classification. Therapeutic target was defined as Systolic Blood Pressure (SBP) < 150mmHg.

Results: Sixty-one patients were included, mean aged 72.5 years with a sex ratio M/F 1.25. The average age at the time of discovery of hypertension was 60.12 years [38-85]. Fifty-five patients were followed for nephropathy (90.2%). The dominant stages of CKD were 3 and 4 (in 28 and 12 patients respectively). Among our population, thirty-four patients were diabetic (55.73%), 21 were dyslipidaemic (34.42%) and 12 patients had coronary disease. Among the diabetic patients, hypertension was considered as a diabetic macroangiopathy in 15 patients (44.11%). Metabolic syndrome was found in 21 patients (34.42%). Thirteen patients were classified as very high cardiovascular risk, 34 as high risk, and 9 as moderate risk. The mean SBP was 140mmHg+/-24.28. Vascular nephropathy was found in 28 patients (45.9%) and left ventricular hypertrophy in 3 patients (4.91%). The therapeutic target was achieved in 42 patients (68.85%) of whom 24 were on a calcium channel blocker, 28 were on a renin-angiotensin-aldosterone blocker, 15 on a combination containing a loop diuretic and 10 on a central antihypertensive.

Conclusion: Hypertension in the elderly is associated with multiple comorbidities mainly diabetes. Regular follow-up of this population with adaptation of treatment is necessary to reduce mortality rate and prevent complications related to hypertension and treatment.

47. Acute renal injury in nephrology consultation: prevalence, epidemiology and clinical profile

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Introduction: Renal failure (RF) is a global health problem. It is multifactorial and can be detected during the follow-up of different pathologies. The aim of this work is to study the different epidemiological and clinical profiles and the evolution of patients with the recent discovery of RF.

Methods: We conducted a retrospective descriptive study at the nephrology consultation over a period of two years (January 2020-January 2022). Patients followed for chronic renal disease were excluded.

Results: The number of patients with newly discovered RF was 93. The mean age was 63.3 years [23-96] with a sex ratio M/F of 1.3. Hypertension was present in 64 patients (68.81%) and diabetes in 47 patients (50.53%). Twelve patients had heart failure. Familial nephropathy was found in 12 patients. The mean creatinine level was 185.77µmol/l +/- 134.83. Three patients had haematuria. The proteinuria was glomerular in 14 patients (15.05%). Treatment interfering with renal hemodynamic was noted in 49 patients (52.68%), recent iodinated contrast injection in 7 patients (7.52%). Fifteen patients were dehydrated (16.12%). Renal ultrasound was performed only in 60 patients. No obstructive cause was found for this RF. Polycystic kidney disease was found in one patient. Emergency haemodialysis was indicated for threatening hyperkalaemia (2 patients), uraemia (1patient) and uremic pericarditis (1 patient).A renal biopsy was performed in two patients and showed acute interstitial nephritis in one patient and amyloidosis in another. The evolution was marked by a stabilization of the renal function in 28 patients, an improvement in 31 patients and a worsening in 20 patients, among whom five developed end-stage renal failure and chronic haemodialysis.

Conclusion: Screening for RF is imperative in all patients with risk factors. A rigorous follow-up by a nephrologist is necessary in order to establish the etiological diagnosis, to evaluate the severity and to initiate a possible treatment.

48. Nutritional and lipid profile in chronic haemodialysis patients

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Introduction: The incidence of chronic kidney disease requiring haemodialysis continues to increase. Its progression is marked by several complications, including alterations in nutritional status and disturbances in lipid balance in chronic haemodialysis patients. The objective of this study is to investigate the prevalence of dyslipidaemia as well as the prevalence of malnutrition in this category of patients.

Methods: This is a transient retrospective study involving 21 haemodialysis patients at the haemodialysis Unit of Mongi Slim Hospital in La Marsa. The assessment of nutritional status was based on body mass index (BMI), serum protein levels, and albumin levels. The evaluation of the lipid profile was based on cholesterol and triglyceride levels.

Results: The studied group consists of 21 patients with an average age of 54 ± 10 years. The initial nephropathy is diabetic in 28.57% of cases, vascular in 33.33%, and indeterminate in 19.04% of cases. Eighty percent of the studied patients have hight blood pressure, 28.57% are diabetic, 52.38% are smokers, and 9.52% are alcoholics. The estimated body mass index is 20.3 ± 2. Among these patients 9.52% have hypercholesterolemia, and 23.5% have hypertriglyceridemia, 76.2% have an albumin level below 40. Furthermore, we did not observe a significant correlation between the underlying nephropathy and the frequency of dyslipidaemia or malnutrition. We found that the risk of dyslipidaemia is higher in male subjects who smoke.

Conclusion: This study highlights the importance of malnutrition and dyslipidaemia in chronic haemodialysis patients, which contributes to excessive mortality. Therefore, it emphasizes the importance of prevention through the identification of risk factors.

49. Prevalence of left ventricular hypertrophy in haemodialysis

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Introduction: Among the various cardiovascular complications in haemodialysis patients, left ventricular hypertrophy (LVH) is one of the most common. The aim of this study was to evaluate the frequency of LVH and analyse the associated factors in patients undergoing chronic haemodialysis.

Methods: This is a retrospective study involving 21 haemodialysis patients from the haemodialysis unit of Mongi Slim Hospital, La Marsa. Left ventricular hypertrophy is defined by a left ventricular mass index, as determined by transthoracic echocardiography, exceeding 115 g/m² in men and 95 g/m² in women. Results: The study group consisted of 21 patients with a mean age of 54 ± 10 years. The primary nephropathy was diabetic in 28.57%, vascular in 33.33%, and indeterminate in 19.04% of cases. Eighty percent of the patients were hypertensive; 28.57% were diabetic; 52.38% were smokers; and 9.52% were alcohol consumers. The prevalence of LVH in this population was 28.5%.

Conclusion: Left ventricular hypertrophy is very common among haemodialysis patients. Collaboration between cardiologists and nephrologists is necessary to protect these patients from all related complications.

50. Hepatitis B-associated cryoglobulinemic vasculitis: a diagnostic and therapeutic challenge

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Introduction: Cryoglobulinemia, a rare extrahepatic manifestation of hepatitis B virus (HBV) infection, presents significant diagnostic and therapeutic challenges. Here, we present a complex case of cryoglobulinemic vasculitis in a patient with chronic HBV infection. Case Description: A 56-year-old man with a history of type 2 diabetes, hypertension, and coronary artery disease was hospitalized for acute nephritic syndrome with rapidly worsening renal function.

Methods: A multidisciplinary approach, including thorough clinical, biological, and immunological assessments, was adopted to address the complexity of the patient's clinical presentation. Results: The diagnosis was hepatitis B-associated cryoglobulinemic vasculitis with multisystem involvement, including cutaneous manifestations (ochre dermatitis), neurological symptoms (axonal sensorimotor polyneuropathy), vascular complications (thrombosis in the upper and lower limbs), and otolaryngological involvement (leukocytoclastic necrotizing vasculitis), as well as renal involvement (membranoproliferative glomerulonephritis). Chronic HBV infection was confirmed with a high viral load of 1.33 x 10^2 IU/mL and a profile of mixed cryoglobulins composed of monoclonal IgG Kappa and monoclonal IgM Kappa. Treatment involved corticosteroids and antiviral therapy with entecavir. However, the patient developed hemorrhagic and septic complications and ultimately succumbed to acute respiratory distress.

Conclusion: This case highlights the diagnostic and therapeutic difficulties of cryoglobulinemic vasculitis in patients with chronic HBV infection. A multidisciplinary approach is essential for optimal management, and close monitoring is necessary to prevent treatment-related complications.

51. Atypical presentation of multiple myeloma with renal involvement: a report of 7 cases

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Introduction: Multiple myeloma (MM) is a highly polymorphic disease. Early management is crucial for both survival and renal prognosis. The aim of our study was to report atypical presentation cases of this disease in our nephrology department.

Methods: We conducted a single-centre, descriptive, retrospective study over a period of 4 years (2020-2024). This study included patients diagnosed with multiple myeloma with renal involvement, where the initial clinical presentation was atypical. We detailed the circumstances of discovery, clinical and biological data for these patients.

Results: Among the 9 patients with confirmed multiple myeloma (MM) and renal involvement, the initial presentation was atypical in 7 cases. The sex ratio was 0.75. The median age was 63 years (range: 49-75 years). All patients were referred for the investigation of acute renal failure. The circumstances of diagnosis included infection in 3 cases, specifically infectious bronchopneumonia, acute pyelonephritis, and septic arthritis of a prosthetic joint. One patient had been followed for 3 months for primary myelofibrosis, with a revaluation of the sternal puncture revealing bone marrow infiltration by 20% plasma cells. Other discovery circumstances included acute pulmonary oedema, chronic diarrhoea with hyperproteinaemia and rhabdomyolysis. All patients had normochromic normocytic anaemia with haemoglobin levels ranging from 7.1 g/dl to 10 g/dl. Five patients had hypocalcaemia, with levels ranging from 1.4 mmol/l to 1.8 mmol/l. Protein electrophoresis showed a narrow-based gammaglobulin peak in 5 cases and hypogammaglobulinemia in 2 cases. The diagnosis of MM was confirmed by sternal puncture in 6 cases and by bone marrow biopsy in one case.

Conclusion: The circumstances of discovery of multiple myeloma were highly polymorphic in our series. We emphasize the importance of performing protein electrophoresis for diagnostic orientation.

52. Unexplained ascites in a chronic haemodialysis patient: a case report

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Introduction: In the management of chronic haemodialysis patients, the emergence of ascites presents a notable diagnostic and therapeutic challenge. This clinical case details the presentation, investigation, and management of a chronic haemodialysis patient developing ascites, illustrating the complexities of diagnostic and therapeutic care.

Methods: We report a descriptive observation of a case involving a chronic haemodialysis patient presenting with ascites. Case Report: The patient is a 39-year-old woman with a history of type 1 diabetes, hypertension, and well-controlled hyperthyroidism under treatment. She has been on chronic haemodialysis since January 2023, with sessions three times a week. The interdialytic weight gain was 1 kg, and residual diuresis was 400 ml/24h. On examination, the patient had massive ascites. Analysis of the ascitic fluid revealed a transudative fluid with a serum-ascites albumin gradient (SAAG) of 18. Investigations excluded tuberculosis (negative PCR for Mycobacterium tuberculosis and culture of ascitic fluid), cirrhosis, heart failure, ovarian cancer, and peritoneal carcinomatosis. Exploratory laparotomy with biopsy revealed serofibrinous peritonitis with no signs of malignancy or caseous necrosis. The management involved extending haemodialysis sessions to 5 hours and regularly performing therapeutic paracentesis. Given the endemic nature of the region, the patient was empirically started on anti-tuberculosis treatment, resulting in good clinical improvement and partial resolution of ascites over the past week.

Conclusion: In chronic haemodialysis patients presenting with unexplained ascites, a methodical approach is essential to exclude reversible conditions. Appropriate management of ascites, even in the absence of a clear aetiology, remains crucial to improving patients' quality of life.

53. Fracture on pathological bone in a chronic haemodialysis patient: a case report

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Introduction: Femoral neck fractures are common in patients on chronic haemodialysis due to renal osteodystrophy. This case study aims to analyse the clinical features, management challenges, and outcomes of a pathological femoral neck fracture in a haemodialysis patient.

Methods: We illustrate a clinical case of a femoral neck fracture with a favourable outcome following the placement of a hip prosthesis.

Results: The patient is an 88-year-old man, on haemodialysis for 2 years, with a history of diabetes, hypertension, and ischemic heart disease. The patient sustained a fall from standing height, and radiography revealed a pertrochanteric fracture. The phosphocalcic workup showed a serum calcium level of 2.18 mmol/l, vitamin D level of 20.3 ng/ml, and parathyroid hormone (PTH) level of 79 pg/ml. Surgical intervention was performed with the placement of a total hip prosthesis. The choice of prosthesis and surgical technique was adapted to the patient's anatomical peculiarities and bone quality. The outcome was marked by progressive and complete functional recovery.

Conclusion: This case highlights the challenges associated with managing pathological femoral neck fractures in haemodialysis patients. Further studies are needed to establish clear guidelines for the optimal treatment of these high-risk patients and the management of their phosphocalcic balance.

54. Anti-glomerular basement membrane glomerulonephritis with thrombotic microangiopathy lesions

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Introduction: Anti-glomerular basement membrane (anti-GBM) disease is a rare small vessel vasculitis responsible for a pneumorenal syndrome. Renal histology typically shows extracapillary proliferation. We report the case of a patient diagnosed with anti-GBM glomerulonephritis with advanced lesions of thrombotic microangiopathy.

Case report: A 23-year-old patient with a daily cannabis consumption habit and occasional alcohol use, presented with a pneumorenal syndrome. The patient experienced a large haemoptysis, confirmed by bronchoscopy and analysis of bronchoalveolar lavage fluid, with a GOLD score of 200. There was a rapid deterioration in renal function, with creatinine levels rising from 100 μmol/l to 222 μmol/l in a few days, accompanied by an active urinary sediment and significant haematuria (three crosses). Laboratory tests revealed severe haemolytic anemia with an initial haemoglobin level of 4 g/dL, elevated LDH levels at 400, necessitating a transfusion. Thrombocytopenia was also confirmed, with a platelet count of 63,000. The diagnosis of anti-GBM disease was supported by the presence of anti-GBM antibodies and lesions consistent with this condition on renal biopsy: An extracapillary glomerulonephritis with linear deposits of IgG along the glomerular capillaries on immunofluorescence. However, the biopsy also revealed thrombotic microangiopathy (TMA) lesions. The patient received 3 boluses of Solu-Medrol followed by full-dose corticosteroid therapy at 1 mg/kg/day for 30 days, with a gradual tapering thereafter. The patient also underwent 6 courses of Endoxan and 14 sessions of plasmapheresis. He had ceased cannabis use but continued occasional tobacco consumption. This therapeutic approach led to a favourable improvement in renal function with creatinine levels decreasing from 328 to 105 µmol/L, absence of haemolysis with stable haemoglobin around 10 g/dL without any transfusions.

Conclusion: The presence of thrombotic microangiopathy in this patient, in conjunction with anti GBM disease, suggests a possible additive or synergistic effect of cannabis on renal pathology. Further research is needed to fully understand the relationship between cannabis use and renal damage, particularly in the context of other underlying conditions.

Abstracts presented on 20 October 2024

Oral abstracts

55. A comparative study of health-related quality of life between patients on maintenance haemodialysis and kidney transplant recipients

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Introduction: Although kidney transplantation has been shown to improve health related quality of life (HRQOL), it may also present with negative consequences as it relates to the side effects of immunosuppressives, the anxiety and uncertainty concerning events of graft rejections and graft loss.

Methods: This cross sectional multicentre included KTRs with functioning grafts and patients on MHD from three major transplant centres and five dialysis units in Nigeria. QOL was assessed with the Kidney Disease QOL-SF-36 (version 1.3) questionnaire.

Results: 491 (293 MHD, 98 KTRs, and108 healthy controls) participants were enrolled. With the exception of bodily pain, KTRs had significantly higher HRQOL mean scores in the eight subscales of the SF-36 than patients on MHD: physical functioning (73.8 ±25.3 versus 52.7±27.5; P < 0.0001), log role-physical (4.4±0.4 versus 3.8±0.6; P < 0.0001), bodily pain (79.1±25.8 versus 72.7±25.5; P = 0.10), general health (73.8±23.2; P < 0.0001), vitality (65.1±15.0 versus 57.2; P = 0.002), social functioning(62.5±24.6 versus 50.6±25.0; < 0.0001), log role emotional (4.3±0.4 versus 4.1±0.5; P = 0.01) and mental health(84.7±16.7 versus 72.3±17.9; P < 0.001). Except for mental health and social functioning, the subscale scores and the two Mental Component Summary (MCS) and Physical Component Summary (PCS) measures for KTRs and healthy controls did not differ. KTRs have higher PCS (46.8±9.1 versus 38.2±8.8; P <0.0001) and MCS (50.1±8.1 versus 43.9±9.1; P < 0.0001) scores than patients on MHD. In multivariable analysis, kidney transplant is significantly associated with higher PCS score (β coefficient 8.33; 95% CI 5.08 - 11.58; P < 0.0001) and higher MCS score (β coefficient 6. 29; 95% CI 3.11- 9.47; P < 0.0001).

Conclusion: Kidney transplant recipients have a better health related quality of life than patients on MHD, and comparable HRQOL scores to healthy individuals

56. Transforming growth factor-β (TGF-β) and chronic kidney disease progression among black patients attending a tertiary hospital in Johannesburg, South Africa

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Introduction: Transforming growth factor-beta (TGF-β) has both fibrotic and protective roles; in its fibrotic roles it can serve as a novel biomarker essential for early diagnosis and prediction of chronic kidney disease (CKD) progression.

Methods: This was a prospective longitudinal study among black patients with CKD who attended the kidney outpatient clinic between September 2019 and March 2022 at the Charlotte Maxeke Johannesburg Academic Hospital (CMJAH) in South Africa. Patients provided urine and blood samples for laboratory investigations at study entry (0) and at 24 months follow up. Serum and urine (TGF)-β1, TGF-β2 and TGF-β3 levels were measured at baseline using the Human TGF-β duoset ELISA. Multivariable logistic regression analysis was used to determine if TGF-β predicted CKD progression.

Results: A total of 312 patients were enrolled into the study, 297 (95.2%) patients completed the 2 years of follow up. The prevalence of CKD progression was 47.8% by a sustained decline in eGFR of >4 ml/min/1.73 m^2/year or more and 51.9% by a change in uPCR > 30 %. Of the patients with CKD progression; 54.9% were men, the baseline median age was 59 (46 - 67) years, eGFR was lower [37 (32 - 51) mL/min/1.73 m2] and urine protein creatinine ratio (uPCR) was increased [0.039 (0.015-0.085) g/mmol]. Comparing patients with, and those without CKD progression, the median serum TGF-β1 was 21210 (15915 – 25745) ng/L vs 24200 (17570 – 29560) ng/L (P = 0.004), the median urine TGF-β3 was 17.5 (5.4 – 76.2) ng/L vs 2.8 (1.8 – 15.3) ng/L (P = 0.017) respectively. There was no significant association of baseline serum and urine TGF-β isoforms with CKD progression after multivariable logistic regression analysis.

Conclusion: Patients with CKD progression had lower concentrations of serum TGF-β1 and increased urinary TGF-β3 concentrations at baseline. However, baseline TGF-β isoforms did not predict CKD progression.

57. Barriers to transplantation in Africa: a preliminary report from the AFRAN Transplantation Survey

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Introduction: Kidney transplantation (KT) rates in Africa remain low. Expansion of access to KT requires evaluation of barriers to transplantation. The AFRAN Transplantation Committee here reports preliminary findings of the largest survey yet undertaken of perceived barriers to KT amongst AFRAN-affiliated nephrologists.

Methods: AFRAN social media platforms were used to recruit 275 anonymous participants via snowball sampling. Respondents completed a 5-point Linkert scale on-line survey analysing perceived barriers to KT. Survey internal reliability was assessed using the Cronbach alpha test (test score 0.927). Relative contribution of identified barriers was analysed using the Friedman ANOVA test. Logistic regression was used to determine the effect of identified barriers on programme activity and deceased donor capability.

Results: Lack of patient access to KT was reported by 87 respondents (31.7%); deceased donor (DD) programme activity was reported by 47 (17.1%). High Linkert scale scores (median 5 points) were reported for cost of transplantation and lack of deceased donors; followed by lack of surgical expertise, transplant co-ordinators, immunologists and immunological assays, histopathologists, drugs, living donors, guidelines, socio-religious acceptance, and governmental support (median 4 points); and respondents were neutral regarding lack of skilled nephrologists, anaesthetists, radiologists, drug monitoring, and recipient awareness as barriers ($P < 0.001$). Lack of access to drugs (OR 0.68, 95% CI 0.50 – 0.95, $P = 0.021$) and local guidelines (OR 0.72, 95% CI 0.52 – 0.99, $P = 0.042$) were associated with decreased probability of programme activity. Cost of transplant (OR 0.45, 95% CI 0.27 – 0.73, $P = 0.001$) and socio-cultural acceptance (OR 2.25, 95% CI 1.43 – 3.53, $P < 0.001$) were cited as significant factors in deceased donor (DD) programme activity.

Conclusion: Development of local guidelines may stimulate establishment of transplant programmes. Cost of transplant and associated lack of access to drugs remain significant barriers to transplantation in Africa.

58. Clinical features associated with contrast-induced acute renal failure during percutaneous coronary interventions

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Introduction: Contrast-Induced Nephropathy (CIN) represents a frequent complication, responsible for one-third of acute renal failure in the hospital setting. Multiple comorbidities in patients undergoing percutaneous coronary intervention are among the reasons cited. The aim of this work was to determine the incidence of CIN as well as the characteristics of the population at risk.

Methods: This is a retrospective study of 133 patients explored by coronary angiography or treated by coronary angioplasty during a 3-month period in 2023. CIN was defined as an increase in blood creatinine of 44 μmol/l or 25% of basal value, 48 to 72 hours after the procedure. Patients on chronic dialysis and with missing data were excluded from this study.

Results: The median age of the patients studied was 63 years, with extremes ranging from 28 to 82 years. Male predominance (65.8%) was noted, with a sex ratio of 2.33. 114 patients (86%) had two or more cardiovascular risk factors. Our population was distributed according to the main cardiovascular risk factors as follows: arterial hypertension (59%), active smoking (53%), diabetes (50%), dyslipidaemia (34%). The incidence of CIN was 15.7% (21 patients). Chronic renal failure and left ventricular dysfunction defined by filtration rate below 40% were significantly more present in patients who developed CIN (19% vs. 3.6%, P = 0.022; 43% vs. 16%, P = 0.014).

Conclusion: In conclusion, the incidence of CIN still remains high with current management. Further studies are needed to test prevention strategies in populations at different risk levels.

59. Risk factors for contrast-induced nephropathy in cardiology

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Introduction: Contrast-induced nephropathy (CIN) is increasingly encountered in interventional cardiology. Knowledge of the associated factors is one of the pillars of prevention of this complication. The aim of this work was to identify factors predictive of CIN in the cardiology setting.

Methods: This was a retrospective study of 133 patients explored by coronary angiography or treated by coronary angioplasty over a 3-month period. CIN was defined as an increase in blood creatinine of 44 μmol or 25% of basal value, 48 hours after the procedure. Lack of creatinine monitoring and chronic dialysis were the main causes of exclusion.

Results: The median age of our patients was 63 years, with a male predominance (70%). CIN was noted in 21 patients (15.7%), 8 of whom were at high risk: 2 patients had a glomerular filtration rate (GFR) between 45 and 60ml/min with another risk factor for CIN, and 6 patients had a GFR strictly below 45ml/min. It was significantly associated in a multivariate study with the following risk factors: pre-existing renal insufficiency (P = 0.028), hyperuraemia (P = 0.022), primary angioplasty (P = 0.019) and an iodine/DFG dose ratio >0.74 (P = 0,04) In contrast, only left ventricular ejection fraction ≥50% was identified as being independently associated with prevention of NCI. (P = 0,002).

Conclusion: Pre-existing renal insufficiency, hyperuaremia, primary angioplasty and an iodine/DFG dose ratio >0.74 were the main predictive factors of CIN in our population. Taking them into account in preventive strategies remains crucial in patients at high risk of CIN.

60. Medication and the risk of contrast-induced nephropathy

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Introduction: The use of certain medications can promote the development of contrast nephropathy. Others have shown a protective effect. The aim of this work was to determine the effect of concomitant medication on the risk of occurrence of contrast-induced nephropathy (CIN) after a percutaneous coronary intervention.

Methods: This was a retrospective study of 133 patients explored by coronary angiography or treated by coronary angioplasty during a 3-month period in 2023. CIN was defined by an increase in blood creatinine of 44 µmol/l or 25% of the basal value, 48 to 72 hours after the procedure. We recorded all medications prescribed before and after the procedure.

Results: The median age of the patients studied was 63 years, with a male predominance (70%). The majority of patients were diabetic and hypertensive. The most commonly prescribed drugs were: renin-angiotensin-aldosterone system inhibitors (RAASi) in 66% of cases, beta-blockers (76%), diuretics (50%), except for anti-ischaemic treatment. The use of RAASi or beta-blockers was associated with the prevention of renal function, with a 3-fold higher probability of not developing this nephropathy. On the contrary, diuretic medication was associated with a higher risk of CIN (P = 0.02). This mainly concerned loop diuretics (P = 0.014). It was also noted in our patients that a combination of RAASi with diuretics causes them to lose their protective effect.

Conclusion: Concomitant medication with iodinated contrast media injection remains a controversial issue. Further studies are needed to establish a causal link.

61. Neutrophil-lymphocyte ratio as a predictive marker for the occurrence of contrast nephropathy

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Introduction: Some studies have demonstrated the usefulness of the neutrophil/lymphocyte ratio (N/L) in identifying the risk of developing renal disease. The aim of this work was to determine the value of the N/L ratio in predicting the risk of occurrence of contrast-induced nephropathy (CIN).

Methods: This was a retrospective study of 133 patients explored by coronary angiography or treated by coronary angioplasty during a 3-month period in 2023. CIN was defined by an increase in blood creatinine of 44 µmol/l or 25% of basal value, 48 to 72 hours post-procedure. We calculated the N/L ratio in any patient.

Results: The median age of the patients studied was 63 years, with a sex ratio of 2.33. Hypertension was present in 59% of patients. Diabetes was present in half the cases. The incidence of CIN was 15.7% (21 patients). The median N/L ratio in the CIN group was 4.8 versus 2.7 in the non-CIN group ($P < 0.001$). A N/L ratio greater than 3.49 was significantly associated with the risk of CIN (odds ratio = 6.09, $P = 0.004$).

Conclusion: The N/L ratio may be a promising, simple and inexpensive biomarker for predicting the risk of CIN.