

unexplained thrombocytopenia after starting ceftriaxone is imperative.

Conclusions: CONCLUSION: Drug induced thrombocytopenia remains a diagnosis of exclusion and poses a significant therapeutic challenge. This case highlights the importance of altered drug metabolism and clearance in critically ill patients, especially those with renal dysfunction. Prompt cessation of offending drug remains the mainstay of therapy.

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I have no potential conflict of interest to disclose.

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WCN25-1020

NEPHROLOGY AS THE LEADER IN POINT OF CARE ULTRASOUND (POCUS)



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Introduction: POCUS is an invaluable tool in elucidating the volume status of patients. The use of POCUS decreases time to diagnosis, increases patient satisfaction, and improves quality of care. As the masters of volume, the mastery of POCUS is essential for the nephrologist. POCUS in nephrology has been growing throughout the country, and now Nephrologists have a duty to become not only masters of POCUS, but to help bring the use of POCUS to other disciplines as well.

Methods: Since 2021 POCUS has been taught to nephrologist fellows in a biweekly lecture and hands on sessions, leading to a robust use in the fellowship. To increase the use throughout the hospital, nephrology has lead multiple interdisciplinary efforts throughout the hospital. In the nursing field, we have had multiple nephrologist led IV insertion classes, and for the dialysis nurses have led cannulation and assessment workshops for AVF. In Neurology, Neurosurgery, and Cardiology, we have led and are leading accredited courses to increase the use and documentation of billing throughout the hospital. In gastroenterology we have partnered to increase POCUS in research and diagnosis of inflammatory bowel disease. We are working with the pulmonology/critical care division to teach POCUS to the residents as well.

Results: Nurses report increased use of POCUS for IV insertion and assessment, which has decreased the number of IVs inserted by residents, freeing time for other clinical responsibilities. With the increased knowledge of POCUS in all fields, conversations regarding volume and patient assessment has become more fluid. Residents report that the use of POCUS directly improves their day to day rounds and improves their connection with patients.

Conclusions: Through the use of POCUS on the wards and the many multidisciplinary efforts Nephrology has been recognized as the leader of POCUS in the local community. This helps create a culture of POCUS which helps facilitate patient care throughout. POCUS has now become a focus of recruitment in residents and fellows, and the culture of POCUS continues to grow throughout the hospital.

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WCN25-1144

A CASE REPORT OF A 79 YEAR-OLD FEMALE WITH ALUMINUM TOXICITY PRESENTING AS ALTERED MENTAL STATUS , ELDORET, KENYA



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Introduction: Aluminum can cause toxicity in patients with end stage renal disease (ESRD) as it is renally excreted. In low- and middle-income countries (LMICs), potential sources of aluminum toxicity include the use of aluminum cookware and clay pots, the use of well water, and the contamination of dialysis water.

Methods: Patient concerns: Here we report a case of an elderly East African woman from a rural area with ESRD undergoing twice-weekly hemodialysis, who presented with altered mental status. Acute cardiac and neurological events were ruled out. Head CT was normal. Both infectious and metabolic workups were unremarkable. Since the patient was from a rural home where her family used clay pots, aluminum utensils and well water for drinking, a decision was made to rule out aluminum toxicity. Serum aluminum levels were significantly elevated at 534 micrograms/L. Due to the concern of life-threatening neurotoxicity upon administration of deferoxamine, the only treatment offered was daily hemodialysis using a high flux dialyzer. Within one week of daily hemodialysis, her mental status started to improve.

Diagnosis: aluminum toxicity based on the clinical presentation and elevated serum aluminum levels

Results: Outcomes: more than 50% reduction in serum aluminum levels as well as improvement in the patient's cognition after intensified dialysis treatment using high flux dialyzer for 9 months.

Conclusions: Take home lessons: ESRD patients in LMICs are at a higher risk for potential aluminum toxicity compared to those in developed countries. Regular testing of serum aluminum levels is necessary in these patients since the initial presentation of aluminum toxicity can be nonspecific.

Key points:

1. The diagnosis of aluminum toxicity was confirmed by measuring serum aluminum levels alongside clinical suspicions. A deferoxamine infusion test has been widely used, however, the gold standard for diagnosis is a bone biopsy.

2. Management involves the removal of offending exposure, and treatment with high flux dialyzer and/or chelation with deferoxamine.

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WCN25-1167

ADVANCING GLOBAL HEALTH NEPHROLOGY EDUCATION: A US – KENYA COLLABORATIVE EXPERIENCE



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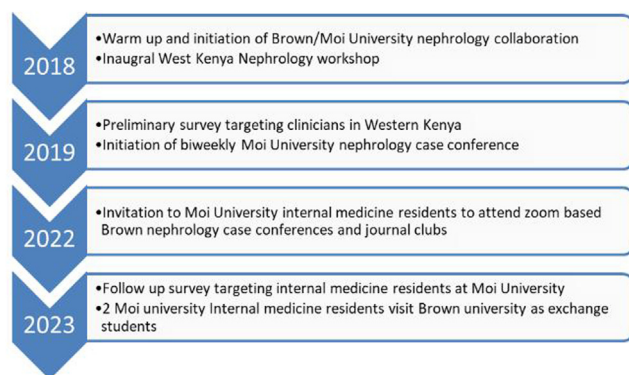
Introduction: Chronic Kidney Disease (CKD) is a major cause of morbidity in Sub-Saharan Africa. Kenya has a low nephrologist/million population ratio (0.7 versus a global median of 11.8). Until recently, there were few nephrology education efforts in western Kenya. To address this gap, collaboration between Moi University (MU-Kenya) and Brown University (BU-USA) was initiated in 2018. The goal was to enhance nephrology education in the region. To share the experience in building this international collaboration, we describe the initial phase, outline perceived education needs and improvements among the target population, and present future directions for the program.

Methods: A description of the relationship-building and common goal setting is shared. An initial survey was carried out in September 2019 targeting clinicians to understand local nephrology education needs. Thereafter, a series of interventions were rolled-out to address arising needs. A follow-up survey was then carried out among MU internal medicine residents in April 2023 assessing perceived benefit from the program. Finally, the future direction for the program is delineated.

Results: The BU team accepted an invitation to visit Eldoret in 2018. Key stakeholder meetings were held with the Dean MU School of Medicine, the head of the teaching hospital, and the Kenya Renal Association to ensure alignment. (Figure 1 shows key milestones in the Moi/Brown University nephrology collaboration.) The initial survey in 2019 included 45 clinicians involved in kidney disease care. Only 9% felt confident managing nephrology patients, and just 26% had

attended a nephrology education session in the last three years. However, 83% preferred case-based future education sessions. Consequently, several interventions were introduced. In 2019, biweekly case-based nephrology conferences began for MU internal medicine residents and were also open to BU fellows. In October 2022, MU residents were invited to attend BU's weekly case-based nephrology conferences and biweekly journal club meetings. The annual West Kenya nephrology conference has become a regular event to share nephrology knowledge among local clinicians. Of the 30 respondents in the 2023 follow-up survey, 96.6% reported confidence in managing general kidney disease patients. However, only 10% were confident in caring for transplant patients, and 53.3% in treating glomerular diseases. Moving forward, the annual conference and case-based discussions will focus on transplant and glomerular disease care. Efforts are underway to support care in the local community to enhance early diagnosis and timely management of CKD. Additionally, plans are advancing to establish the first nephrology fellowship program in western Kenya.

Figure 1: Key milestones in the Moi/Brown University nephrology education collaboration



Conclusions: This experience illustrates in-person relationship building and common goal setting for a global health partnership in nephrology. The program may have led to improved confidence in managing kidney disease. Still, post-renal transplant care and glomerular disease remain areas of need. In a globalized world, the MU/BU experience could be valuable for other institutions seeking to build sustainable international nephrology education partnerships.

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WCN25-1297

BLOOD PRESSURE CONTROL IN LOW FLUX AND HIGH FLUX MODALITIES OF MAINTENANCE HEMODIALYSIS OF CHRONIC KIDNEY DISEASE PATIENTS - A COMPARATIVE STUDY

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Introduction: Chronic kidney disease (CKD) is a major public health problem affecting 8–16% of adults globally.¹ Untreated CKD can progress rapidly to end-stage renal disease (ESRD). Declines in kidney function are typically associated with rises in blood pressure, and sustained elevations in BP hasten the progression of kidney function decline. Due to the dramatic increase in the need for RRT in recent decades and the upward trend and owing to the shortage of kidneys for transplantation and complications of peritoneal dialysis, hemodialysis is the most common method of them.

Methods:

1. STUDY SETTING:

This study is a hospital based study (in and out patients), Department of Nephrology at Medica Superspecialty Hospital, Kolkata.

2. STUDY DURATION:

This study has been completed within one and half year of time duration (February 2024 to July 2024).

3. STUDY DESIGN:

This study is a prospective cross-sectional observational study.

4. SAMPLE SIZE:

The sample size is calculated in discussion with our statistician using the formula of $n = \frac{(Z\alpha/2 + Z\beta)^2 [p_1(1-p_1) + p_2(1-p_2)]}{(p_1 - p_2)^2}$ Where,

n = Sample Size

$Z\alpha/2$ = Critical value of Normal distribution at $\alpha/2$ (here, for a confidence level of 90%, Z value is 1.645)

$Z\beta$ = Critical value of Normal distribution at β (here, for a power of 80%, Z value is 0.84) p_1 = Proportion of patients having low flux hemodialysis having high BP = 0.56

p_2 = Proportion of patients having high flux hemodialysis having high BP = 0.42

From the formula at 90% confidence interval and 80% of power we get the minimum number of observations required are of 155 in each group. For that, 31 patients have been taken for each group and evaluated for 5 hemodialysis sessions for a total of 155 observations in each group.

5. DATA MANAGEMENT AND STATISTICAL ANALYSIS:

The statistical software SPSS version 23 has been used for the analysis. Kolmogorov-Smirnov analysis has been used to check if data is following the normal distribution. Fischer exact test or Chi-square test has been used to check the significance of difference between frequency distribution of data in different groups. Student's t test or Mann-Whitney U test has been used to study significance of difference between two groups. z-test has been used for comparison of proportions. Pearson's rank order correlation analysis and Spearman's correlation analysis has been used to assess correlation between two variables. To assess the difference between three groups ANOVA has been used. p value less than of 0.05 has been considered to be statistically significant.

Results: It shows that among 62 patients on dialysis, 60% ($n=37$) are male and 40% ($n=25$) are female. Among 31 patients on Low flux modality 32% ($n=10$) are Diabetic nephropathy, 13% ($n=4$) are Hypertensive nephropathy, 6% ($n=2$) are Biopsy proven glomerulonephritis/ interstitial nephritis and 48% ($n=15$) are of unknown cause. Among 31 patients on High flux modality 29% ($n=9$) are Diabetic nephropathy, 19% ($n=6$) are Hypertensive nephropathy, 10% ($n=3$) are Biopsy proven glomerulonephritis / interstitial nephritis and 42% ($n=13$) are of unknown cause. In Low-flux modality 3% ($n=1$) of the patients are having Controlled and 97% ($n=30$) are having Un-controlled Pre-dialytic BP. In Low-flux modality 19% ($n=6$) of the patients are having Controlled and 81% ($n=25$) are having Un-controlled Intra-dialytic BP. While comparing Intra Dialytic Weight Gain (IDWG), the p-value obtained is greater than 0.05. Hence, it has been concluded that there does not exist any statistically significant difference in IDWG across Low-flux and High-flux modalities of hemodialysis. While comparing the number of requiring antihypertensives in Low and High flux modality, the obtained p value is > 0.05 . Hence it has been concluded that there is no statistically significant difference in antihypertensive requirement across Low or High flux modality. While comparing effect of smoking over Uncontrolled Pre-dialytic BP, in each of Low and High flux modality the obtained p value is > 0.05 . Hence it has been concluded that smoking is not associated with Uncontrolled Pre-dialytic BP in either Low or High flux modality. While comparing effect of smoking over Uncontrolled Post-dialytic BP, in each of Low and High flux modality the obtained p value is > 0.05 . Hence it has been concluded that smoking is not associated with Uncontrolled Post-dialytic BP in either Low or High flux modality. In Low-flux modality out of 31 patients 42% ($n=13$) are having normal hemoglobin level and 58% ($n=18$) are anemic. In High-flux modality out of 31 patients 39% ($n=12$) are having normal hemoglobin level and 61% ($n=19$) are anemic. The study shows that in both Low Flux and High Flux modalities of dialysis, many of the patients are having anemia. Here the p-value obtained is greater than 0.05. Hence, it has been concluded that there is no statistically significant association between Low-flux and High-flux modalities of hemodialysis and hemoglobin profile of patients. The study shows that in respect to requirement of Erythropoietin dose, the p-value obtained is greater than 0.05. Hence, it has been concluded that there does

