RECOMMENDATIONS FROM THE NATIONAL SYMPOSIUM ON ANEMIA RENAL RESEARCH - THE PATIENTS’ VOICE, PART ONE, THE RESEARCH AGENDA: Dennis Cotter1, Mae Thamer1, Yi Zhang1, Onkar Kshirsagar1, Nick Hamilton-Cotter1,2, Medical Technology and Practice Patterns Institute, Bethesda, MD, United States

The first symposium to improve anemia management strategies through patient-driven research was held on July 2019 targeting ESRD patients and stakeholders. Historically, patient engagement has been noticeably absent in the design phase of most CKD research studies including anemia trials.

First, we selected high priority anemia management topics by conducting a Delphi survey among ~100 dialysis patients; results of which informed the Symposium meeting structure. Second, the knowledge gap was bridged by patient and stakeholder attendees participating in a transparent consensus-building process. The Symposium delivered an integrated list of anemia management research priorities and potential strategies to improve dialysis care in real-world clinical settings. Themes included: Quality of Life; Treatment with ESAs; Blood Transfusions, Iron and Volume Overload; Quality of Anemia Care; and The Future of Anemia Treatment. Consensus on theme priorities was searched by ~100 patients and stakeholders attendees who addressed study design, data collection, reporting and dissemination of study results, anemia management policy making, and patient education.

The final selection of patient-centered (P-C) anemia management study designs focused on outcomes important to patients; are summarized in the Technical Report (link: http://renalhemianemiasearch.org/wp-content/uploads/2019/10/Report.pdf). Our dissemination strategy is to give the Report to agencies for their consideration as fundable P-C studies; regulatory agencies; and developers of new anemia treatments. Also, a lay-version of the Technical Report will be developed and given to patient advocacy groups to tailor the “message” that best addresses their needs in fostering P-C anemia research. We plan to use a multi-media strategy in “getting the message out” to key audiences. An unexpected finding is the need for kidney disease education. The resulting P-C anemia management research recommendations will ensure that resources are invested in patient outcomes and the achievement of patient goals for future dialysis populations.

COMPARISON OF ATTITUDES TOWARDS PLANT-BASED EATING AND DIET COMPOSITION IN AN INNER-CITY POPULATION OF CKD AND FAMILY MEDICINE PATIENTS:

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Plant-based eating has been shown to be beneficial for pts with CKD, but little is known of their attitudes and how it relates to what they are eating. We compared the attitudes toward plant-based eating and actual diet in an indigent, immigrant population of patients with CKD and those attending Family Medicine clinic (FM).

A face-to-face survey was conducted in a random convenience sample of pts in CKD (23) and FM clinics (22). Patients were asked to choose answers from a set of 5 multiple choice questions about plant-based eating assessing their beliefs regarding difficulty in finding foods in restaurants, affordability, ability to get proteins and vitamins, and ability to find good tasting recipes. A mean score was calculated with lower score indicating more difficulty (PBE-score). Diet analysis was based on 24hr recall and analyzed using ASA-24 software. Comparisons are by t-test unless noted.

Mean age was 54.3±2.5 yrs. There were 16 (35.6%) males and 22 (62.2%) females with 40 black (88.9%), 1 Asian, 1 Hispanic and 1 other. 36 (80%) had not completed college. 23 (51%) had an income < $20K; 16 (35%) were employed. 20 (44%) had diabetes. Mean BMI was 30.4±1.6 with 41% >30. There were no differences between clinics. As expected CKD pts had a higher creatinine (2.01±0.39 vs 1.88±0.7, p=0.04), and drank more fluid (2490±335.6 vs 1367±167.1, p=0.005) than FM pts, but fruit and vegetable intake was poor. Protein, carbohydrate intake and total calories were similar. PBE-score did not correlate with dietary intake in either group and serum cholesterol did not differ (184.3±9.4 vs 170.2±8.0, p=NS).

In our population: 1. Pts with CKD had a more positive attitude towards plant-based eating and believed it would be easier to incorporate into their diet. 2. CKD pts ate more cholesterol perhaps due to intake of eggs and fatty seafood, and drank more fluid. 3. Despite the difference in attitude there was no difference in vegetable intake between the clinic groups. 4. The positive attitude of CKD pts towards plant-based eating suggests that education would be successful in this group. The reason for the positive attitude in CKD pts should be explored further as our population as a whole has a high prevalence of obesity and diabetes and all patients could benefit.

RENALE MALAKOPLAKIA: A CASE REPORT: Ansaam Daoud1, Ahmad Jabri1, Yeshwanter Radhakrishnan1, Nathavath Tanphaichitr1. 1Cleveland Clinic Akron General, Akron, OH, United States

Malakoplakia (MPL) is a rare granulomatous condition that targets the genitourinary tract. MPL may mimic other disease processes rendering it clinically challenging. The objective of this report is to describe a case of MPL mimicking acute pyelonephritis and lymphoma. A 58 year old female presented to the emergency department with complaints of nausea, vomiting and flank pain. Her medical history included Type 2 diabetes, chronic kidney disease Stage 3 and recurrent urinary tract infections (UTI). Her vital signs were within acceptable ranges. Laboratory testing showed increased white blood cell (WBC) count of 11.7 thou/cmm, increased platelet count of 590 thou/cmm and creatinine was elevated at 1.72mg/dl. Her urinalysis returned an increased WBC count of 510 per high power field (HPF); an increased red blood cell count of 10/HPF; large leukocyte esterase and +4 bacteruria. Her urine culture grew extended spectrum beta lactamase (ESBL) Klebsiella pneumonia. Renal Ultrasound showed a 5cm hypoechogenic region in the left kidney. Pelvic Computed Tomography showed mass-like infiltration in both kidneys concerning for lymphoma. Urology recommended Interventional Radiology-guided biopsy of the mass, which demonstrated fibrous and fatty tissue with infiltrates of histiocytes, plasma cells, lymphocytes, neutrophils and scattered Michaelis-Gutmann bodies. Immunohistochemical stains confirmed the cluster of differentiation (CD) 163 positive histiocytes. The findings were consistent with MPL and the patient was treated with a four week course of Bactrim.

MPL has been linked to poorer bacterial infections, with Escherichia coli being the most reported, and has been found to occur in immunocompromised patients. No guidelines have been established for treatment of MPL, but most approaches involve antibiotics working intracellularly to aid the defective phago-lysosomal mechanism. Surgical intervention may be the treatment of choice in unifocal or advanced renal injury.

In our case, MPL is attributed to diabetes and ESBL Klebsiella pneumonia. Until MPL can mimic other disease processes, it should be on the list of differential diagnoses in patients presenting with UTIs and renal masses to reduce the chance of misdiagnosis, as well as to avoid unnecessary treatment.

STAPHYLOCOCCAL INFECTION-ASSOCIATED GLOMERULONEPHRITIS (SAGN) AND NEPHROTIC SYNDROME IN AN INTRAVENOUS DRUG USER WITH HEPATITIS C: A CHALLENGING CLINICAL SCENARIO: Ghansham Das1, Ayorinde Solope1, Rajib Gupta1, William DiFilippo1, Haris Mohbenn2, Syed Bukhari1. 1SUNY Upstate Medical University, Syracuse, NY, United States

Renal disease in intravenous drug users (IVDU), especially those with Hepatitis C, can present with challenging clinical scenario and biopsy picture. We describe a case of a 46 year old male who presented with shortness of breath, chest pain and acute kidney injury.

A 46 year old Hispanic male with a history of Intravenous drug use and untreated hepatitis C presented with shortness of breath and chest pain. He was noted to have Methicillin Resistant Staphylococcal and eggs (1.05±0.27 vs 0.42±0.16, p=0.048) and drank more fluid (2490±335.6 vs 1367±167.1, p=0.005) than FM pts, but fruit and vegetable intake was poor. Protein, carbohydrate intake and total calories were similar. PBE-score did not correlate with dietary intake in either group and serum cholesterol did not differ (184.3±9.4 vs 170.2±8.0, p=NS).
bacteremia and tricuspid valve endocarditis. On physical exam he was found to have bilateral leg edema. His initial serum creatinine was 1.54 mg/dL (baseline creatinine 0.94 mg/dL). Urinalysis showed proteinuria and hematuria. Urine sediment revealed isolated WBCs and RBCs with no casts or crystals. A 24-hour urine collection revealed 8.8 g proteinuria. Serology showed positive c-ANCA with negative MPO and PR3 levels, low C3 and normal C4, negative ANA, Anti-PLA2R, Cryoglobulin and rheumatoid factor. A renal biopsy performed which was consistent with SAGN likely secondary to infective endocarditis. All glomeruli in the biopsy showed diffuse proliferative GN with focal MPGN pattern and rare crescent, near-full house immunofluorescence with both capillary wall and mesangial staining with intense IgA staining and small subepithelial (hump-like) and subendothelial deposits on ultra-microscopy.

SAGN has been described in recent years as a common mode of infection-related GN particularly in IVDU. The presence of nephrotic-range proteinuria in this case presents a challenging scenario and MPGN secondary to hepatitis C may be considered a differential. However, nephrotic-range proteinuria has been described in SAGN and endocarditis-associated GN cases in variable percentages, ranging from 6-48% (1,2).

Clinicians should maintain a broad differential while treating complicated patients. Clinical suspicion and appropriate work-up can delineate more complex pathology and improve patient outcomes.

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DISSEMINATED Nocardia Wallacei in a Kidney Transplant: Not All Brain Lesions Are Metastasis:

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Nocardia can cause pulmonary, cutaneous, and disseminated infections in immunocompromised patients. Disseminated nocardiosis has a mortality rate of 7% to 44% and greater than 85% in immunocompromised patients. Few cases have been reported in United States with disseminated Nocardia Wallacei in a kidney transplant as to our knowledge.

A 63 year old Hispanic man with past medical history of ESRD secondary to HTN and DM s/p DDKT in 2018. He presented with shortness of breath and headaches for the past 3 weeks. Also, he has had weight loss of 20 pounds over the past month. Denies fevers, chills or cough. Physical examination remarkable for vs within normal limit and lower extremities weakness.

Admission laboratories showed a creatinine 1.0 mg/dL and normal electrolytes. A Head CT scan was negative but brain MRI showed several foci of restricted diffusion. A Chest ct scan resulted with bilateral pulmonary infiltrates. Bronchovascular lavage (BAL) was done and cultures preliminary were negative. Patient began with altered mental status. Repeated Head CT Scan showed an enlarging lesion of the brain. He was started in empiric treatment for Nocardia. BAL cultures came positive for Nocardia Wallacei after 5 days of empiric treatment for Nocardia. He was treated with Bacitrum and meropenem. Repeated CT scans showed decrease size of nodules.

Cerebral nocardiosis may present acutely with signs of sepsis or intracranial mass effects, but severely immunocompromised patients may be asymptomatic. Few cases have been reported of Nocardia Wallacei but the importance of early clinical recognition to begin empiric treatment may this case remarkable.

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HEMOPHAGIC LYMPHOHISTIOCYTOSIS: A RARE AND FATAL DISEASE ASSOCIATED WITH KIDNEY TRANSPLANT:

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Hemophagocytic lymphohistiocytosis (HLH) is rare life-threatening condition characterized by major immune activation and massive cytokine production by mononuclear inflammatory cells, due to defects in cytotoxic lymphocyte function. HLH has a high mortality and less than 10% probability of survival in 3 years. The clinical features of HLH can be nonspecific and overlap with a variety of other illnesses which make difficult to identify. A 48-year-old AA women s/p living recipient donor kidney transplant 1999 secondary to SJL presents with fever and malaise during the last month. She was admitted to ICU with septic shock. PMXs remarkable for T cell lymphoma in remission and CMV colitis treated with ganciclovir for close to 1 year. Immunosuppression consisted of mycoph 360 mg po bid and prednisone 20mg po daily.

Physical examination remarkable for hypotension, abdominal tenderness. Fever and rash consistent with a new skin laceration. Infectious disease work up resulted negative including PD fluid and Lumbar puncture.

Laboratories were remarkable for cytopenia, hypofibrinogenemia, hypertriglyceridemia 720, ferritin >10,000 and elevated L DH 20,722. Bone marrow resulted with 40-50% cellular marrow with granulocytic hypoplasia (relative erythroid hyperplasia) and increased numbers of hemophagocytic histiocytes. Diagnosis of hemophagocytic lymphohistiocytosis (HLH) was made given above Bone marrow. Patient was started on Dexamethasone. However, her clinical condition deteriorated with refractory hypotension despite being on 4 vasopressors, worsening metabolic acidosis and hyperkalemia of 6.4. Family members decided to proceed with comfort care.

Clinicians should suspect HLH in a immunocompromise host presenting with multiple organ failure. Early diagnosis is crucial because of the high mortality.

PREVALENCE OF METABOLIC ACIDOSIS AMONG PATIENTS WITH CKD AND HYPERKALEMIA:

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Hyperkalemia (HK) and metabolic acidosis (MA) often co-occur in patients with chronic kidney disease (CKD). This study estimated the prevalence of MA among patients with CKD and HK. Annual MA prevalence among patients with CKD and HK from 2014-2017 was estimated using electronic medical records from the Research Action for Health Network. For each calendar year, adult patients were required to have 

Figure 1

From 2014-2017, MA prevalence (bicarbonate <22) ranged from 24.5% to 29.4% for K+ >5.0 and 33.1% to 39.1% for K+ >5.5 (Figure 1, please also see for prevalence of bicarbonate <18). Among patients with CKD and K+ >5.0, those with MA (bicarbonate <22) were younger (mean age 68.7 vs 74.0), more likely to have CKD stage 5 (34.8% vs 13.4%) or type II diabetes (62.6% vs 53.3%), less likely to receive renin-angiotensin-aldosterone system inhibitors (54.3% vs 59.8%), and more likely to receive potassium-binding treatments (31.1% vs 10.5%), diuretics (61.2% vs 52.0%), or oral sodium bicarbonate (20.9% vs 4.0%) compared to those without MA.

From 2014-2017, MA prevalence (bicarbonate <22 mEq/L) ranged from 24.5% to 29.4% for K+ >5.0 mEq/L and 33.1% to 39.1% for K+ >5.5 mEq/L among patients with CKD and HK and was sensitive to the definition of MA utilized. MA is commonly seen in conjunction with hyperkalemia in patients with CKD stage 3-5, as the kidney’s ability to maintain electrolyte and acid-balance is compromised.