Chronic kidney disease of non-traditional causes and proposed risk factors prevalence in hemodialysis patients from southwest Guatemala

T. Laux, J. Barnoya, V. Sanchez, A. Lucas, E. Herrera, E. Cipriano; 1Barnes Jewish Hospital / Washington University in St. Louis, St. Louis, MO/US, 2Washington University in St. Louis, St. Louis, MO/US, 3Instituto Guatemalteco de Seguridad Social (Guatemalan Social Security Institute), Guatemala City, Guatemala

Program/Project Purpose: An epidemic of chronic kidney disease of non-traditional causes (CKDnT) has been documented in southwest El Salvador and Nicaragua, yet no data is available from neighboring Guatemala. Therefore, we sought to determine both the chronic kidney disease (CKD) and CKDnT proposed risk factors prevalence in hemodialysis patients from southwest Guatemala.

Structure/Method/Design: The Guatemalan Social Security healthcare is the largest provider of hemodialysis in southwest Guatemala. All patients on hemodialysis were screened for diabetes. Non-diabetics were interviewed (and charts reviewed) asking for known CKD and proposed CKDnT risk factors. Interviews and chart reviews were performed in March 2014 by residents and fellows from collaborating Guatemalan and American training hospitals. Analyses were done in SPSS.

Outcomes & Evaluation: Most patients (74%) were non-diabetic (178/242). Hypertension was the most prevalent known CKD risk factor (56%). Many of CKDnT's proposed risk factors were present in more than half the patients, including male gender (81%) and agricultural work (64%). Almost one third were former sugar cane workers (29%). Upon dialysis initiation, only hyperuricemia was common (54%). About 20% (45/242) of participants did not have a history of hypertension or overweight/obesity and could be considered possibly affected by CKDnT. Table 1. Known CKD and proposed CKDnT risk factor prevalence in non-diabetics from Southwest Guatemala. Known CKD Risk Factors: (n=178 (%): Hypertension: 99 (55.6%) Overweight/Obese: 59 (33.1%) Not Hypertensive or Overweight: 45 (25.3%) Family History Renal Disease: 29 (16.3%) Hypertension: 51 (28.8%) Diabetes: 47 (26.4%) Proposed CKDnT Risk Factors Age < 50 years old: 106 (59.6%) Age at Diagnosis ≤ 40 years old: 99 (55.6%) Male: 144 (80.9%) ≤ 6 years of schooling: 127 (71.3%) Possible Leptospirosis: 15 (8.4%) Ever Use NSAIDs: 154 (86.5%) Alternative medicine: 99 (55.6%) Agricultural Occupation: 99 (55.6%) Female: 54 (30.1%) Overweight: 45 (25.3%) Family History Diabetes: 25 (14.2%) Family History Hypertension: 48 (27.0%).

Interpretation: The prevalence of AVF is high and the majority of mothers are asymptomatic. There is no significant difference in the prevalence of vaginal symptoms between mothers with and without AVF infection. A symptom-based screening approach is ineffective in identifying AVF and BV. Alternate and feasible diagnostic methods are needed to screen for AVF and BV in resource-limited settings.

Funding: National Institute of Health.

Abstract #: 01NCD018

Increasing education about diabetes among community health workers in Naivasha, Kenya

N. Lee; University of Washington School of Medicine, Seattle, WA/US

Program/Project Purpose: Non-communicable diseases like diabetes mellitus are often neglected in Naivasha, a town of over 200,000 people, an hour north of Nairobi. This is largely due to lack of funding for diabetes since the focus is on communicable diseases like HIV and tuberculosis. However, rates of diabetes are increasing with minimal support and care. Management of diabetes is expensive since it is not subsidized like HIV or TB. The aim of this project was to increase education and awareness of diabetes among community health workers (CHWs) in Naivasha through teaching sessions and providing booklets on diabetes mellitus that cover the basics of diabetes and its care and management.

Structure/Method/Design: A community needs assessment was conducted to determine the current resources available to diabetics and CHWs regarding diabetes care and management. CHWs from three communities surrounding Naivasha town were identified to be partners in this project due to their interest and investment in diabetes. Information for the diabetes booklets was compiled specifically for CHWs to address the basics of diabetes, complications, recognizing signs and symptoms, and a general guide on common medications used in Naivasha to manage diabetes. Teaching sessions were held with CHWs to distribute the booklets, go over the information, and to answer any questions or concerns. Quizzes given both before and after each teaching session were used to assess the efficacy of the project and the CHWs’ understanding of diabetes.

Outcomes & Evaluation: Twenty-two CHWs participated in two teaching sessions and 47 booklets were distributed to CHWs among the three communities. 13 CHWs completed both the before and after quizzes. They all increased their scores after the teaching session: 52.5% before and 88.8% after. The nutritionist in charge of diabetes care at Naivasha District Hospital was given the remaining booklets for future training sessions and outreach programs in the communities.

Going Forward: The project increased education and awareness of diabetes among community health workers in Naivasha. For future training sessions, the CHWs educated through this project will have a strong foundation on diabetes and its care and management. Additional funding and formal training sessions are still necessary to support CHWs and other health workers regarding diabetes care in Naivasha.

Funding: This project was funded by the University of Washington Department of Global Health, and student funded.

Abstract #: 01NCD020