Abstract ID: S253

Title: Estimation of Cardiovascular Risk in Individuals with Chronic Spinal Cord Injury: Preliminary Results

Track: Cardiovascular Rehabilitation & Clinical Cardiology

Authors: Maria C. Ruiz Hurtado, MD; Roberto C. Sahagun Olmos, MD, MSc; Juana Zavala Ramirez, MD, MHA; Maria L. Dergal Carreto, MD; Luis J. San Juan Rivas, MD; Israel J. Garcia Muñoz, MD; Jimena Quinzaños Fresnedo, MD, MSc; Ramiro Perez Zavala, MD; Aida Barrera Ortiz, MD; Clara L. Varela Tapia.

Institutions: 1. Instituto Nacional de Rehabilitación Luis Guillermo Ibarra Ibarra, Mexico City, Mexico. 2. Instituto Nacional de Rehabilitación, Mexico City, Mexico. 3. Instituto Mexicano del Seguro Social, Mexico City, Mexico.

Introduction: Spinal cord injury is one of the most devastating neurological conditions secondary to traumatic events; this injury potentially generates severe disability mainly due to mobility limitation. In addition to immobility, there are other risk factors linked to cardiovascular disease, which is the leading cause of death in this population; the risk of cardiovascular disease and stroke is 3 and 4 times respectively, higher than in able bodied persons. So far, there are not studies concerning cardiovascular risk factors in Mexican population with spinal cord injury.

Purpose: To evaluate cardiovascular risk and associated factors in individuals with chronic spinal cord injury.

Design: Cohort study, preliminary results.

Methods: A prospective, descriptive, cohort study of patients with chronic spinal cord injury, of any ASIA (American Spinal Injury Association) grade, 18 years and older, admitted from March 2016 to February 2017 was conducted. The information collected included the patient age, neurological level and grade of injury when admitted, cardiovascular risk factors (i.e. blood chemistry, lipid profile, etc.), and a psychological evaluation. We summarized data and applied ANOVA variance analysis and Spearman’s rank correlation coefficient.

Results: We identified and included 48 subjects, aged 35.35 ± 9.57 years, the most commonly neurological level was C4 (20.8%), and the most frequent ASIA grade was A (58.4%). According to the Framingham scale there was a predominance of low risk individuals (46), 30 individuals had low HDL levels. We found a mild to moderate correlation between the neurological level, higher score on the ASIA scale and lower HDL levels (p=0.036). According to the analysis of variance (ANOVA) also we found a correlation between HDL and ASIA score (p=0.009).

Conclusions: Despite the fact that most of these subjects had a cardiovascular risk considered low, this population have a diversity of cardiovascular risk factors not considered by the Framingham coronary heart disease score, such as the absence of physical activity, the level, grade of the injury and the time of evolution. The medium and long term follow up is necessary to come to conclusive results, since these findings can help to develop specific scales of estimation and preventive strategies addressed to this population.