

Poster Topical Area: Aging and Chronic Disease

Location: Auditorium

Poster Board Number: 41

P01-020 - Older Adults with Type 2 Diabetes Have Higher Serum Hepcidin and Lower Serum Iron Levels Than Non-diabetics

 Sunday, Jun 10  8:00 AM – 6:00 PM

Objectives: To explore if hepcidin levels are higher and s-iron levels are lower among OA with diabetes (OA-T2D) vs non-diabetics. A secondary objective was to explore if antidiabetic drugs are associated to lower hepcidin concentrations among OA with T2D.

Methods: 803 Mexican OA aged 60 years old or above, participated in a cross-sectional study from July-August 2015. Fasting serum samples were collected. S-hepcidin (ng/mL) was measured using a commercial ELISA kit. T2D was defined if it was previously diagnosed by a physician. Low serum iron (LSI) was defined as <65mcg/dL. Data about antidiabetic drugs were collected by self-report and by asking OA showing all the drugs they were taking with or without a doctor's prescription. Ordinal logistic regression model were used to associate T2D with tertiles of Log-hepcidin (Hep-tertiles), adjusting by sex, age, BMI, IL-6, s-retinol, s-ferritin, anemia, ethnicity, hypertension, SES, sarcopenia, drugs and frailty. Among OA-T2D (n=234), we explored the type of antidiabetic drug therapy with Hep-tertiles.

Results: Mean age was 71.5 years old. Prevalence of T2D was 30% and anemia 35.3%. OA-T2D had a higher median of hepcidin (16 vs 11 ng/mL, p=0.003) and higher proportion of LSI (11.4% vs 7.1%, p=0.043) than non-diabetics. OA-T2D were associated to higher odds of Hep-tertiles in comparison with non-diabetics (OR=1.6, 95%CI 1.26, 2.05). Among OA-T2D, those with insulin therapy were associated with lower odds to Hep-tertiles vs non-treated (OR=0.46, 95%CI 0.23, 0.94). No differences were found among OA-T2D taking other antidiabetic oral drugs vs non-treated. Higher duration of T2D were positively associated to Hep-tertiles (OR=1.57, 95%CI 1.54, 1.59).

Conclusions: OA-T2D shown higher hepcidin concentrations and LSI than non-diabetics population. Insulin therapy was associated to lower hepcidin levels among OA-T2D. The

high prevalence of T2D and anemia in Mexican elderly population, place hepcidin levels as a potential biomarker to improve therapies. Further longitudinal studies are needed to understand the role of s-hepcidin in the development of T2D and antidiabetic drugs as well in elderly population.

Funding Source:

CONACYT- FONSEC SSA/IMSS/ISSSTE SALUD 2014-1, S0008-2014-1 –
000000000234157

Presenting Author**Vanessa De la Cruz**

Researcher
Center for Evaluation and Survey Research
Cuernavaca, Morelos, Mexico

CoAuthors: Aarón Salinas-Rodríguez – National Institute of Public Health; Salvador Villalpando-Hernández – National Institute of Public Health