

---

**Association Between Low Serum Cholesterol and Impulsivity Behaviours in Eating Disorders Patients Compared with a Control Group**

J. Gonzalez<sup>1</sup>, L. Carral-Fernandez<sup>1</sup>, I. Rio-Hortega<sup>1</sup>, E. Gil-Camarero<sup>1</sup>, A. Gonzalez-Gomez<sup>1</sup>, P. Benito-Gonzalez<sup>1</sup>, E. Garcia-Quevedo<sup>1</sup>, C. Gonzalez-Ortiz<sup>1</sup>, R. Sancristobal<sup>1</sup>, I. Velar-Castellanos<sup>1</sup>, G. Boteon<sup>2</sup>, A. Gomez del Barrio<sup>3</sup>

<sup>1</sup>psychiatry, Hospital Universitario Marqués de Valdecilla, Santander, Spain ; <sup>2</sup>psychiatry, Hospital Trieste, Trieste, Italy ; <sup>3</sup>psychiatry, Hospital Universitario Marqués de Valdecilla, Santander, Spain

---

**INTRODUCTION** Previous studies suggest a relationship between decreased serum cholesterol levels and impulsive/aggressive behaviors [1]; however we found just one study in the literature based in eating disorder [2].

#### AIMS

To investigate the potential relationship between lipid profile (cholesterol, HDL, LDL, triglycerides) and measures of impulsivity, aggression or suicidal behavior in a sample of never treated patient with Eating disorder and healthy controls.

#### METHODS

The first episode of eating disorders group consisted of 199 (age range 14-60) subjects included in DETECTA program of Cantabria, Spain, from 2011 to 2013. Other group of 199 healthy controls were initially recruited from the community and matched by age and gender. Socio-demographic information was collected for each subject. Clinical characteristics were ascertained either from clinical charts or by direct questioning the study participants. Lifetime diagnosis of impulse control was assessed with questionnaires developed ad hoc. Impulsivity was evaluated using self-administered questionnaires, Eating Disorder Inventory and Cloninger's Temperament and Character Inventory.

#### RESULTS

Differences found between subgroups did not differ from those shown in the literature, with higher levels of impulsivity in the group of Bulimia. However in the partial correlation we did not find a relationship between cholesterol levels and Impulsivity. We neither found this relationship between suicide attempts, pathological gambling, compulsive buying disorder, self-harm or kleptomania.

#### CONCLUSIONS

Although the biological mechanism between plasma hypocholesterolemia and impulsive behavior has not been fully elucidated this relationship has been established in others pathologies [3], however in eating disorders so far, this theory has not been proved.