BACKGROUND

Obesity is characterised by excessive fat accumulation coursing with a chronic mild inflammatory state, with adipose tissue (AT) being the main site of increased systemic cytokine production. Increased adiposity early in life is the main risk factor for cardiometabolic disorders later in life, with the abnormal accumulation of lipids in AT leading to the production of pro-inflammatory cytokines. To date, the mechanisms involved in metabolic complications have been reported in children and adolescents tracking into adulthood. Targeting inflammation early in life could be key as an important strategy fighting obesity as well as other metabolic complications.

AIM

To evaluate the association between TNF-α, IP-10, IL-6, IL-1β, leptin or adiponectin with body composition biomarkers (BMI, skinfold thickness and waist circumference) in prepupal children.

METHOD

3459 children between 2 and 9 years old (51.5% males) participated in the multiplex assay was studied these children. Linear regression analysis adjusted for age, sex, center and ISCED level was applied.

RESULTS

Detection of inflammation associated with changes in body composition from the early stages of life could be key in order to prevent further degree of overweight and/or obesity as well as its comorbidities. This helps to better understand the mechanisms involved in the aetiology of obesity as well as to establish primary prevention interventions and identify potential targets to fight against this pathology.

CONCLUSIONS

REFERENCES