Abstract Group: 7.1. Paediatric Respiratory Physiology

Keyword 1: Sleep disorders  Keyword 2: Inflammation  Keyword 3: Children

Title: Sleep-disordered breathing and C-reactive protein in obese children and adolescents

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Body: Sleep disordered breathing (SDB) is common among overweight and obese children. It is a risk factor for several health complications, including cardiovascular disease. Inflammatory processes leading to endothelial dysfunction are a possible mechanism linking SDB and cardiovascular disease. C-reactive protein (CRP) is a marker for cardiovascular risk and is independently correlated with obstructive sleep apnea syndrome (OSAS) in adults. Our goal is to evaluate the relationship between CRP and OSAS in overweight and obese children and adolescents. One hundred and twenty children were included in this study (85 controls, 20 mild OSAS, 15 moderate-to-severe OSAS). All subjects underwent polysomnography and a blood sample was taken to determine CRP levels. No significant differences were found in CRP between subjects with or without OSAS and no correlations were found between CRP and OSAS severity. On the other hand we did find a relationship between CRP and BMI (r=0.21; p=0.015) and between CRP en fat mass (r=0.31; p < 0.001) suggesting that CRP levels are correlated with the level of obesity but are not influenced by SDB in obese children and adolescents.