Increase of plasma fatty acids without changes in n-6/n-3-PUFA ratio in asymptomatic obese subjects

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Obesity is associated with a low grade inflammation which contributes to the development of insulin resistance and diabetes. The aim of this study was to assess the total saturated (SFAs), monounsaturated (MUFAs) and polyunsaturated fatty acids (PUFAs) in plasma from asymptomatic obese subjects and to determine the arachidonic/eicosapentanoic acid ratio [ARA/EPA] as a marker of inflammation, and its eventual association with ultrasensitive CRP. Fourteen obese (34.4 ± 11.1y.; BMI: 36.0 ± 4,5 kg/m2) and 12 normal-weight (30.6 ± 7.8y.; BMI: 23,6± 2,4 kg/m2) subjects were recruited and their plasma fatty acids were determined by gas chromatography. usCRP was higher in the obese subjects (p=0,01) and correlates with their body fat content. The percentages of SFAs, MUFAs, PUFAs were not affected in the obese subjects but their concentrations were increased, compared with the control group. However, no differences in the long chain PUFAs (DHA and EPA) concentrations or in the plasmatic ARA/EP