Use of DXA in clinical practice and research

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Corporal composition has been increasingly acknowledged as important to understand the complex inflammatory mechanism, which involve conditions such as: obesity, cancer, metabolic syndrome and Obstructive Sleep Apnea-Hypopnea Syndrome (OSAHS). A more precise way to evaluate body composition can be obtained by using Dual-energy X-ray Absorptiometry (DXA).

This study evaluated the association of the diagnosis OSAHS regarding the body fat measured by DXA, anthropometric parameters and biochemical variables. Was adopted cross-sectional study using a sample consisting of consecutive cases of fifty adult women, suspected of having OSAHS. The women carried out overnight polysomnography, anthropometric evaluations (BMI, neck and waist circumference), DXA and lipid profile, fasting glycemia, insulin, glycated hemoglobin, C-reactive protein and serum leptin levels. OSAHS was defined by the apnea-hypopnea index (AHI) from the overnight polysomnography. According to the AHI, the women were divided in two groups: with and without apnea. Twenty-seven of them had OSAHS (AHI = 22.04 ± 17.55).

The results were: (a) the BMI was not capable of predicting OSAHS in this study (p=0.204); b) for each 1% increase in TBF%, the probability of having sleep apnea increase by 12.8%; (c) Comparing all variables (anthropometrics, DXA and blood sample), the serum leptin was the only variable with a significant difference between the groups (p=0.0257). The results reinforce the role of total body fat and leptin in the etiology of OSAHS and the need to include the evaluation of corporal composition measures by DXA in studies of sleep apnea.

Biography


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