

VAL 60 - BODY COMPOSITION CORRELATES WITH THE SEVERITY OF OBSTRUCTIVE SLEEP APNEA SYNDROME

OBJECTIVE: Obstructive sleep apnea syndrome (OSAS) is a condition closely associated with obesity. Body fat was proved to be a predictive factor for OSAS and its severity.

DESIGN: To study the correlation between the severity of OSAS and body composition measurements.

SUBJECTS / METHODS: 24 patients (18 men, 6 women, mean age 44.4 years) with sleep apnea syndrome (apnea-hypopnea index AHI 30.55 ± 25.5) who had underwent full polysomnography were included in the study. Body composition (body fat, body water and dry lean mass) was assessed using bioelectric impedance assay (BIA). Other measurements included neck circumference and body mass index (BMI = weight/height²). Pearson's correlation coefficient (r) was used to express correlations between AHI and the following parameters: BMI, neck circumference, body fat, dry lean mass, and body water.

RESULTS: The correlation between AHI and BMI was weak (r = 0.39). (Fig.1)

Fig.1 Correlation between AHI and BMI

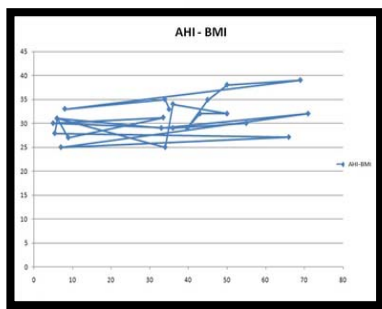
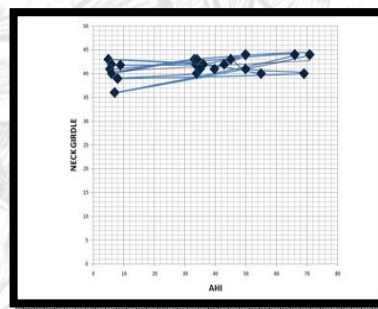


Fig. 2. Correlation between AHI and neck girdle



AHI correlated moderately with neck circumference (r = 0.53), with neck circumference corrected by height (r = 0.58), and stronger with body fat (r = 0.67) and with body water (r = 0.72). (Figs.2 and 3). There was a strong negative correlation between AHI and dry lean mass (r = -0.93). (Fig.4).

Fig.3. Correlation between AHI and body water

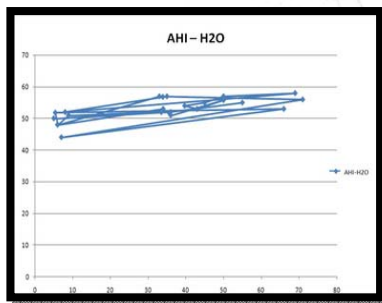
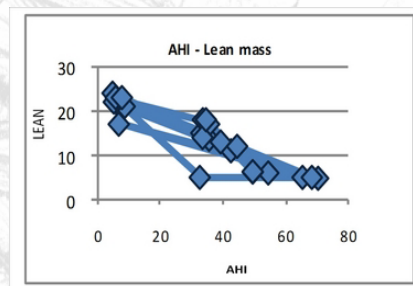


Fig.4. Correlation between AHI and dry lean mass



CONCLUSION: In our study, the severity of OSAS correlated with body fat and with body water stronger than with regional and general obesity.

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