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ABSTRACTS

05 - Rhythmology and stimulation

Anthropometric data: A screening tool for severe obstructive sleep apnea in Tunisian population with atrial fibrillation?

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Introduction Obstructive sleep apnea (OSA) is common in patients having atrial fibrillation (AF). Obesity is a key risk factor for the development of OSA and the prevalence of this sleep disordered breathing among obese patients is high (50—98%).
Purpose The aim of this study was to evaluate correlation between various anthropometric measurements and OSA's severity in patients followed for non valvular AF.
Methods It was a prospective study with 100 patients with AF. All patients underwent polygraphy and measures of body mass index (BMI), neck circumference (NC) and waist circumference (WC).
Results Analysis of the sleep study results showed that OSA was present in 90 patients: Severe OSA was diagnosed in 31 patients. The average hypopnea apnea index (AHI) was 21.7 ± 13.6 event/h. The mean BMI was $28.5 \pm 4.8\,kg/m^2$: 24 patients had normal BMI, 38 were overweight and 29 had moderate obesity. Severe and massive obesity, were noted respectively at 6 and 3 patients. The BMI was significantly associated with severe OSA ($P = 0.041$) and the cut-off value for predicting severe OSA was $27.5\,kg/m^2$ with a sensitivity of 71% and specificity of 50%.
The NC was $38.8 \pm 3.9\,cm$. Forty-five% of the population had truncal obesity. NC was correlated to both AHI ($P = 0.013$) and severe OSA ($P = 0.045$). The ROC curve indicated that the limit value for predicting severe OSA was $39.5\,cm$ with a sensitivity of 55% and a specificity of 64%.
The mean WC was $107.5 \pm 12.6\,cm$. Android obesity was found in 96% of patients. The WC had a significant correlation to both AHI ($P = 0.001$) and severe OSA ($P < 0.001$). The limit value that orient towards severe OSA was $105.5\,cm$ with sensitivity of 77% and a specificity of 58%.

Conclusion Our study revealed that all anthropometric parameters were associated to severe OSA. NC and WC were found to be correlated to AHI. These findings suggest the importance of routine OSA screening in patients having the association: obesity and AF.
Disclosure of interest The authors declare that they have no competing interest.

Predictive factors of cognitive impairment in Tunisian population with non valvular atrial fibrillation

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Introduction Atrial fibrillation (AF) is the most frequently encountered arrhythmia and is largely associated with cognitive decline. Obstructive sleep apnea (OSA) may lead to cognitive decline through chronic sleep fragmentation and intermittent hypoxemia. Does the association between these pathologies increase cognitive impairment's likelihood?
Purpose Determine the prevalence of cognitive deficit in AF patients and to identify the predictive factors of this disorder.
Methods The study concerned 81 patients with non valvular AF. Patients with a history of stroke were not included. The cognitive performance was assessed by evaluating different parameters: Memory, attention and executive functions (inhibition, shifting, updating/monitoring information). A cognitive deficit was considered if at least one of these parameters was defective.
Results The average age was $66,2 \pm 9.7$ years old. A detailed questioning regarding cognitive function objectified that 78% of patients had cognitive deficit. An age greater than 68 years, was significantly related to cognitive disorders ($P = 0.002$). Symptomatic AF with EHRA class III or IV, was statistically associated with cognitive impairment ($P = 0.014$). Referring to polygraph's results, 74 patients (91.4%) had OSA. Moderate and severe OSA

(AHI > 15) were significantly associated with cognitive impairment ($P = 0.004$). Total desaturation time under 90% was correlated with cognitive decline ($P = 0.003$) with a limit value for predicting cognitive deficit, of 4 minutes (sensitivity = 70%, Specificity = 68%). The multivariate study found that predictors of cognitive impairment in AF patients were: age > 68 years($P = 0.012$, OR = 6.3), AHI > 15 ($P = 0.049$, OR = 3.8) and an EHRA class III or IV ($P = 0.025$, OR = 5).

Conclusion   Our study revealed that moderate to severe OSA is an independent predictive factor of cognitive impairment in AF patients. Thus, treating OSA by continuous airway pressure may have a beneficial effect on cognitive function.

Disclosure of interest   The authors declare that they have no competing interest.