body weight, height and body mass index with obstructive sleep apnea syndrome (OSAS) and disease severity.

**Materials and methods:** A total of 172 patients were included in the study. 81 (47,1%) were female and 91 (52,9%) were male. The mean age of the patients was 51,28; while the mean age of the women was 53,16 years and the mean age of the men was 49,60.

Patients were divided into two groups according to apnea-hipopnea index (AHI). Apnea-hipopnea index < 5 was assumed as normal, while AHI  $\geq$ 5 was assumed as OSAS. Also patients with OSAS were divided into three groups according to disease severity from mild to severe.

Complete blood count (CBC) values of group with normal total AHI and group with OSAS were statistically compared.

**Results:** There was no statistically significant difference between presence of OSAS and platelet count (p: 0,321). There was no statistically significant difference between presence of OSAS and MCV (p: 0,342). There was no statistically significant difference between presence of OSAS and neutrophil count (p: 0,559). There was no statistically significant difference between presence of OSAS and lymphocyte count (p:0,998). There was no statistically significant difference between presence of OSAS and n/l ratio (p:0,270). There was no statistically significant difference between presence of OSAS and MPV (p: 0,871).

There was no statistically significant difference between presence of OSAS and height (p:0,996).

Statistically significant difference was found between presence of OSAS and body weight (p: 0,000).

A statistically significant difference was found between presence of OSAS and body mass index (p: 0,000). There was no statistically significant difference between OSAS severity according to total AHI and MPV, neutrophil count, lymphocyte, n/l ratio, MCV, platelet count and height, respectively (p: 0,784, p: 0,515, p: 0,159, p: 0,367, P: 0.841, p: 0.402, p: 0.524).

OSAS severity according to total AHI was statistically significant between body weight and body mass index, respectively (p: 0,001, p: 0,001).

**Conclusions:** In other studies CBC findings like MPV, n/l ratio were correlated with OSAS and disease severity.

In our study there was no correlation. Therefore, further prospective data is needed.

#### Insomnia

# THE EUROPEAN PORTUGUESE VERSION OF THE INSOMNIA SEVERITY INDEX (ISI): RELIABILITY, VALIDITY AND DIAGNOSTIC ACCURACY

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**Introduction:** Insomnia, the most relevant complaint in the context of sleep disorders, still remains an underdiagnosed problem. Its prevalence, serious health consequences and its impact on quality of life demand quick and effective assessment tools. The Insomnia Severity Index (ISI) is a brief self-report instrument to measure clinical insomnia and is one of the most commonly used in clinical and research domains, in several countries. The main purpose of this study is to present the psychometric properties of the European Portuguese version of the ISI.

**Materials and methods:** After the forward-backward translation and pretest application, the Portuguese ISI version (authorized by the author of the original version), was administrated to a total sample of 1274 subjects (439 M, 835 F), ranging from 18 to 95 years-old (Mean=37.52 yrs.; SD=16.82 yrs.), with different academic degrees and occupations: 1024 were individuals from the community (318 M, 706 F), including young and middle-aged adults, and elderly — *Community Sample*, and 250 were insomniac patients (121 M, 129 F) at a Sleep Medicine Centre — *Clinical Sample*. Reliability tests were performed and an exploratory factor analysis using oblimin rotation was conducted. To determine the optimal ISI cutoff score for insomnia detection, receiver operator characteristic (ROC) analysis was used within a subsample of insomniacs and controls matched by sex, age and level of education (N=156).

**Results:** ISI [Pt] Cronbach's alpha coefficient was 0.88, indicating a good internal consistency, and all items contributed to the internal consistency. Corrected item-total correlations ranged from 0.56 to 0.83. It was observed a two-factor solution for both Clinical and Community samples, explaining 54.68% and 67.84% of the total variance, respectively. The area under the curve (ROC analysis) was 0.88, and the optimal clinical cut-off point was 14 (82.1% sensitivity, 79.5% specificity), which were similar to the values reported respecting the original version.

**Conclusions:** The results of the current study support the ISI Portuguese version as a reliable and valid instrument for the assessment of insomnia in clinical and non-clinical population, in various age groups, and for accurately discriminate clinical insomnia.

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Sleep Breathing Disorders

## OBSTRUCTIVE SLEEP APNEA SYNDROME AND FACIAL DYSMORPHISMS IN PAEDIATRIC AGE

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**Introduction:** Children with facial dysmorphism (FD) have a higher incidence of obstructive sleep apnea syndrome (OSAS), due to anatomic and functional changes in the airway. This condition may be asymptomatic, so systematic screening with polysomnography (PSG) is essential.

#### **Objectives:**

- 1) Assess the severity of OSAS diagnosed by PSG in children with FD
- 2) Compare the results of PSG with a control group (CG)
- 3) Compare the symptoms perception with a CG

**Methodology:** A retrospective and comparative study was performed (January 2013-December 2016), with a review of PSG records and laboratory questionnaire answers relative to common symptoms in OSAS. The following variables of PSG were evaluated: sleep efficiency (SE), arousal index (AI), apnea/hypoapnea index (AHI), oxygen dessaturation index (ODI) and respiratory distress index (RDI). The laboratory questionnaire assessed symptoms perception through the following variables: snore, respiratory pauses, difficulty of breathing, difficulty to fall asleep, arousals, sweating, oral respiration, headache, irritability, excessive daytime drowsiness, concentration difficulty. CG patients with no description of FD were chosen randomly. Descriptive and comparative analysis was performed ( $\alpha$ =5%) (SPSS® 21.0).

**Results:** Thirty-four patients (52.9% males) were included in FD group, with a median age of 8 years (Y) (0.3–18); 34 patients (70.6% males) were included in CG, with a median age of 7.5(1–16)Y. Statistically significant differences were observed only in SE (p=0.009), lower in patients with FD. Mean values were higher in the FD group (RDI=11.5, AHI=8.8, ODI=14.7, IA=8.8), compared with CG (RDI=5.6, AHI=2.6, ODI=5.9, IA=5.9). No statistically significant differences were observed between groups relatively to symptoms perception, except for respiratory pauses (p=0.029), which was lower in FD group.

**Conclusions:** Patients with FD had a higher severity of OSAS compared to CG, with equal or even lesser perception of symptoms. These results reinforce the importance of a systematic and objective evaluation of sleep disturbances, through a PSG, in patients with risk factors for OSAS, such as FD.

Neurological Sleep Disorders Affecting Sleep

## BRAIN IN PAIN: PREVALENCE OF SLEEP PROBLEMS IN A UNIVERSITY-BASED HEADACHE CLINIC

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