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Apnea and Hypophenic Index Profiles of Patients Submitted to Polysomnography Type III in Domiciliary Environment

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Keywords Polysomnography; Home examination; Sleep monitoring

Abbreviations AHI-Apnea and Hypopnea Index

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Abstract

Sleep disorders have been characterized as a public health issue, considering the number of individuals affected, the associated secondary diseases and the direct and indirect costs associated with them. Snoring and sleep apnea stand out among them. AHI is classified as mild (5 <IAH <15), moderate (15 <AHI <30) or severe (30 <AHI). Understanding the profile of apneic patients and analyzing their conditions is extremely important for the characterization of apnea, its social and epidemiological profile in the present day. The diagnosis of sleep of the individual is performed from the Polysomnography examination. The same is proposed to monitor sleep and diagnose their disorders. In the present study, after analyzing 80 reports of the type III polysomnography performed in the home environment, in the first half of 2017, 56% of the patients were male; 29% belonging to the age group between 41 and 50 years; and the most representative rate of AHI (40%) was related to the moderate degree of these events. The AHI profile of patients submitted to type III polysomnography in the home environment is moderate, highlighting the relevance of this finding in both genders studied, and the age range of patients most submitted to the examination was updated.

Introduction

According to the World Health Organization, 45% of the world's population does not get enough sleep and 30% of the population has a sleep disorder. In this context, snoring and apnea are highlighted due to the constant presence of patients of these pathologies in sleep clinics and outpatient clinics [1]. The AHI (apnea and hypopnea index) is classified as mild, moderate or severe. Understanding the profile of apneic patients and analyzing their conditions is extremely important for the characterization of apnea, its social and epidemiological profile in the present day [2]. Polysomnography, the standard diagnostic test for nocturnal sleep monitoring, provides AHI in addition to other variables that allow the analysis of each patient [3]. Home polysomnography has been diffused as a way to preserve the sleep environment during its registration, increasing trustworthiness and comfort, besides reducing the waiting time between scheduling and diagnosis of patients [4]. Details such as assembling the equipment and questions related to exam preparation and monitoring have been raised as a way of solving difficulties during its execution. Throughout the examination process the patient was monitored for the efficiency and effectiveness of the registry.

Materials and Methods

We analyzed 80 reports from the performance of the type III polysomnography in the first half of 2017. It was correlated to the AHI, the age group and the sex of the patients. Subsequently, we evaluated the homogeneities and heterogeneities presented between the current study and the findings of the same study conducted between January 2012 to August 2013 and August 2014 to August 2015.

Results and Discussion

It was obtained that among 80 reports of type III polysomnography performed in the home environment, 56% of the patients were male; 29% belonging to the age group between 41 and 50 years; and the most representative rate of AHI (40%) was related to the moderate degree of these events (Figure 1 and 2). The findings referring to females were similar to the opposite sex, since the most significant portion of the patients belonged to the male age group and also presented moderate AHI in 37% of the analyzed reports (Figure 3 and 4). The comparison of these findings with the results obtained in the previous studies reveals the maintenance of the male age group submitted to type III domiciliary polysomnography (41-50 years) and the increase of the female age group from 41-50 years to 41-60 years; in addition to a 55% reduction in the AHI index for both sexes.

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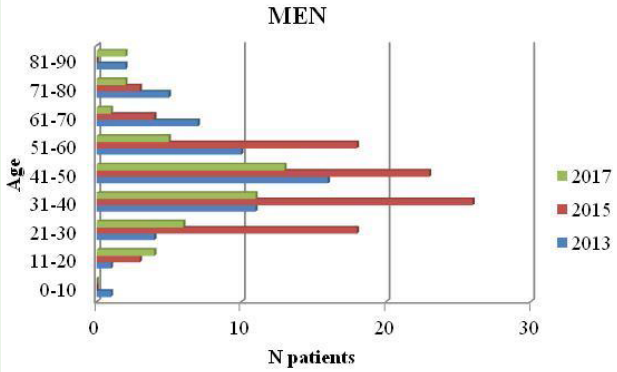

Figure 1: Age groups of men submitted to type III polysomnography between the years of 2013, 2015 and 2017. **INTERNE**. Recife, 2017.

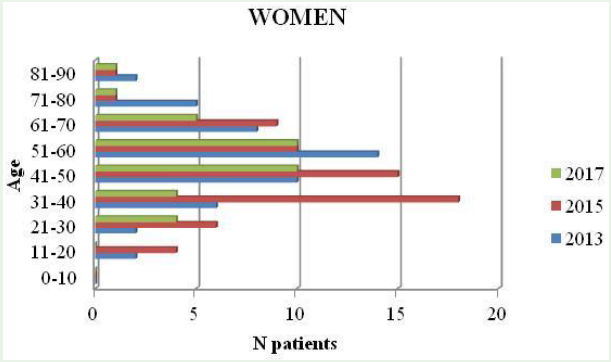

Figure 2: Age groups of women submitted to type III polysomnography between the years of 2013, 2015 and 2017. **INTERNE**. Recife, 2017.

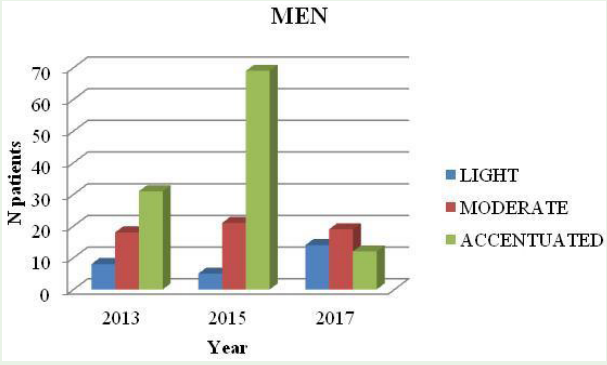

Figure 3: Index of apnea and hypopnea of men submitted to type III polysomnography between the years of 2013, 2015 and 2017. **INTERNE**. Recife, 2017.

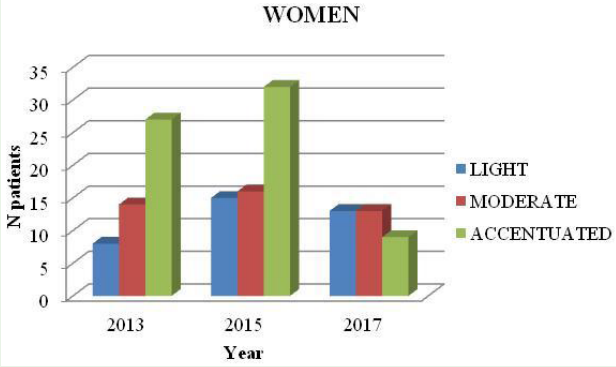

Figure 4: Index of apnea and hypopnea of women submitted to type III polysomnography between the years of 2013, 2015 and 2017. **INTERNE**. Recife, 2017.

Conclusion

The AHI profile of patients submitted to type III polysomnography in the home environment is moderate, highlighting the relevance of this finding in both genders studied, and the age range of patients most submitted to the examination was updated. Compared with the biannual analysis carried out, we can suggest that the increase in the sensitization of the female public and the anticipation of the diagnosis of AHI (moderate) may be associated with an increase in sleep education and the understanding of sleep disorders as a public health issue population.

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