EDITORIAL

The otorhinolaryngologist's role in evaluating patients with respiratory sleep pathology

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The respiratory sleep pathology represents an area of great interest. Doctors of different specialties (cardiologists, pulmonologists, neurologists, endocrinologists, paediatricians, psychiatrists and not least otorhinolaryngologists) deal with the study, diagnosis and application of the various methods of treatment. This demonstrates the increased interest in the sleep pathology, as well as its increased prevalence.

Sleep disorders generally include: narcolepsy, hypersomnia, but also sleep respiratory disorders. The sleep apnea syndrome is part of the respiratory sleep disorders; in turn, it is classified as obstructive, of central and mixed type apnea syndrome. Of these, the obstructive sleep apnea syndrome represents the area of interest for the ENT doctor, who is a consultant in the sleep centers; at the same time, he has access to diagnostic and treatment methods of the obstructive sleep apnea syndrome.

Sleep respiratory disorders include: chronic snoring, upper airway resistance syndrome and obstructive sleep apnea syndrome. This classification is based on the degree of reduction of the upper airway in correlation with the degree of reduction of the blood oxygen concentration. The upper airway caliber decreases, first of all, as a result of the modification of muscle tone while sleeping. Physiologically, during sleep, the muscle tone is low. Maintaining the upper airway open during sleep is ensured by the activity of the genioglossus muscle and of the tensor muscle of the velum palatinum. The reduction of their activity, of different causes, determines collapse up to total obstruction of the airway during sleep. Another element that explains the increased risk of collapse of the upper airway relates to the fact that this is an area devoid of bone structure, therefore presenting an increased risk of collapse during sleep.

It is important to know the elements of anatomy of the upper airway, in combination with those related to the physiology and the pathophysiology of breathing, before starting to study and treat a patient with a respiratory pathology of sleep, especially the obstructive type.

The patient with this type of pathology addresses the family doctor or the ENT specialist for a disturbing symptom for him and his family – snoring.

Snoring is a symptom associated to the sleep apnea syndrome. Its persistence, without the existence of changes specific to sleep apnea, represents habitual snoring. It is not considered as a disease by the specialist, since it does not have implications for patient's health. Its persistence, in association with obstructive manifestations (apnea of varying degrees, periods, duration) represents the obstructive sleep apnea syndrome.

In order to diagnose and treat chronic snoring and obstructive sleep apnea, the ENT clinical examination must be correlated with the results of an extensive investigation called polysomnography, which represents the gold standard in the diagnosis of this type of pathology.

Polysomnography should be performed in specialized laboratories, under the direct supervision and coordination of specialized staff. Its clinical value is given by the fact that all data related to the cardiac and respiratory activities, as well as the activity of limbs, are correlated with the sleep stages. The possibility to relate these data with clinical data makes possible a complete and complex diagnosis of the patient with obstructive respiratory

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sleep pathology, as well as establishing a therapeutic conduct that ensures improvement of these patients' quality of life.

The examination methods of patients are divided into two main groups: those performed during wakefulness: flexible pharyngoscopy, rhinomanometry, CT scan, ultrasound, and those carried out during sleep: flexible pharyngoscopy and CT scan performed during sleep, videofluoroscopy.

Evaluation of the degree of collapse or obstruction of the upper airways is performed by flexible pharyngoscopy. The ENT clinical examination, flexible pharyngoscopy, is frequently carried out during wakefulness, but, for the correct evaluation of the collapse degree, it is indicated to perform the investigation during sleep. The evaluation carried out while asleep – drug induced sleep endoscopy – involves an effective collaboration with the anesthesiologist. It consists in the induction of sleep by the administration of Propofol, followed by performing the flexible pharyngoscopy. The method is a subjective one, the result being directly related to the experience in evaluating the collapse degree of the doctor who performs the investigation. The correlation of data obtained through flexible pharyngoscopy with polysomnographic results makes possible a classification of the sleep respiratory pathology as follows: chronic snoring, upper airway resistance syndrome and mild, moderate and severe obstructive sleep apnea syndrome. In the first two situations, minor changes in the upper airway are signalled, which require the application of minimally invasive treatment techniques of radiofrequency type, while in the case of obstructive sleep apnea syndrome, changes are more severe, sometimes present at several levels, requiring more complex treatment techniques such as uvulopalatoplasty and CPAP therapy.

From this brief exposure of what the study of the respiratory sleep pathology implies, and especially of snoring and obstructive sleep apnea, we can conclude that this type of pathology addresses the ENT doctor. The latter can diagnose and treat both snoring and obstructive apnea (mild and moderate) by therapeutic methods specific to the ENT specialty: septoplasty, uvulopalatoplasty with or without tonsillectomy, radiofrequency and, last but not least, CPAP therapy.

The multitude of therapeutic possibilities applied does not cure the patients with obstructive sleep apnea syndrome; nevertheless, by reducing the degree of obstruction and collapse, it restores an increased quality of sleep and life.