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Letter to the editor

Driving and effectively treated Obstructive Sleep Apnea Syndrome

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The Obstructive Sleep Apnea Syndrome (OSAS) is a respiratory disorder which usually appears during sleep in the form of snoring correlated to obstructive apneas and/or hypopneas. This clinical condition is associated with hypoxaemia, normal sleep architecture fragmentation with consequent deterioration of the quality of sleep, and excessive daytime sleepiness (1). Restless sleep, altered concentration and irritability are typical features of OSAS, whose severity may be evaluated on the basis of the number of obstructive apneas/hypopneas for each hour of sleep. A mild severity is defined as the presence of 5-14 episodes per hour, a moderate degree severity is characterized by 15-30 episodes per hour, while a severe OSAS is determined when the number of apneas/hypopneas is higher than 30 per hour. The prevalence of OSAS in subjects with normal weight aged 30-65 years is about 4% in males and 2% in women (2).

Among the treatment options for OSAS, Continuous Positive Airways Pressure (CPAP) is a front-line measure, since it is effective and safe. CPAP is administered with a nasal mask during sleep hours, and it functions as a pneumatic device stabilizing the pharyngeal walls (1,3). A Cochrane Collaboration review has evidenced that this therapy determines major improvements in subjective and objective sleepiness and in the different measurements of the quality of life in comparison with placebo (4). CPAP, which can reduce the number of apneas/hypopneas to under 5 per hour (a number of episodes minor than 5 is commonly detectable in non-OSAS people too), is a daily life-long therapy, and it is important not only on personal health grounds for OSAS affected people, but also in the more general social context.

OSAS is associated with a personal burden of pathology, in particular cardiovascular disease but, from a social point of view, its impingement on the driving capacity is the feature that has received notable attention. In fact, it is associated with an increased probability of motor vehicle accidents, as demonstrated in particular by findings of a large population study, which showed, almost twenty years ago, that OSAS entails a significantly higher risk of road crashes both for men and women (5). All clinicians should therefore be aware of it and should investigate the presence of sleepiness at the wheel in subjects with risk factors and suspected of OSAS. A recent meta-analysis, which also included the previously cited 1997 paper of T Young and coworkers, has concluded that, in the absence of treatment, sleep apnea is a significant contributor to motor vehicle accidents (6). This publication searched seven electronic databases and identified, as features that may predict accidents in drivers with OSAS, the apnea plus hypopnea index, the body mass index and oxygen saturation.

Through the years, however, different studies have demonstrated that negative OSAS consequences on driving are corrigible and effectively corrected by appropriate therapy, in particular CPAP. Among others, CF George and coworkers documented already in 2001 that the risk of motor vehicle collisions was removed when OSAS patients were effectively treated by means of CPAP, and these authors concluded that, as a consequence, "any restrictions on driving because of OSA

could be safely removed after treatment" (7). More recently, S Garbarino and associates have underlined, in their comprehensive review, that, after effective CPAP therapy, the risk of motor vehicles accidents in OSAS drivers progressively decreases to a level comparable to that of normal subjects (3).

In synthesis, OSAS is a complex clinical condition requiring timely identification, targeted management and adequate follow up to assess the compliance to CPAP therapy. Effective and safe treatment measures, in particular CPAP, exist for OSAS, and as such they must be extensively implemented in subjects affected by this syndrome. Following appropriate CPAP treatment, currently available international scientific evidence indicates that the risk of car accidents for subjects with OSAS is comparable to that of motor vehicle collisions of non-OSAS individuals, highlighting that adequately treated and properly followed up OSAS individuals can drive effectively and safely.

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