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Quality of Life in Obstructive Sleep Apnea-hypopnea Syndrome

Calidad de vida con el síndrome de apnea-hipopnea del sueño

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ABSTRACT

Obstructive Sleep Apnea/hypopnea Syndrome (OSAHS) has as its fundamental mechanism the failure of tonic dilatation of the pharyngeal muscles during sleep. Its prevalence has been fixed between 2-4% in women and 4-8% in men. This pathology elevates blood pressure, increases the risk of cardiovascular and cerebrovascular disease, causes excessive drowsiness and decreases the quality of life of patients who suffer it. Approximately 5% of the general population is affected in their daily lives due to this disorder. Therefore, it is pertinent to have instruments that effectively measure every aspect involved in OSAHS. In Colombia, there is currently no validated scale that evaluates the quality of life in OSAHS; however, worldwide, there are several instruments useful in this topic; one of these is the Sleep Apnea Quality of Life Index (SAQLI), which is validated in four languages, including Spanish, but has not yet been validated in our country, which probably involves a language and cultural barrier at the time of application.

Keywords
sleep apnea; quality of life; validation studies; Colombia.

RESUMEN

El síndrome de apnea-hipopnea obstructiva del sueño (SAHOS) tiene como mecanismo fundamental el fallo de la dilatación tónica de los músculos faríngeos durante el sueño. Su prevalencia se ha fijado entre el 2% y el 4% en mujeres y entre el 4% y el 8% en hombres. Esta patología, a su vez, eleva la presión arterial, aumenta el riesgo de enfermedad cardiovascular y cerebrovascular, causa somnolencia excesiva y disminuye la calidad de vida de los pacientes que la sufren. Aproximadamente, el 5% de la población general se ve afectada en su vida cotidiana por sufrir este trastorno. Por ello, es pertinente contar con instrumentos que midan de manera eficaz todos los aspectos involucrados en el SAHOS. En Colombia, no existe ninguna escala validada que evalúe la calidad de vida con el SAHOS; sin embargo, existen varios instrumentos con este fin, uno

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de los cuales es la Sleep Apnea Quality of LifeIndex (SAQLI), validada en cuatro idiomas, incluido el español, pero aún no se ha hecho este proceso en el país, lo que probablemente implica una barrera lingüística y cultural a la hora de aplicarla.

Palabras clave
apnea del sueño; calidad de vida; estudios de validación; Colombia.

Introduction

Obstructive Sleep Apnea-hypopnea Syndrome (OSAHS) is characterized by recurrent episodes of partial or total collapse (hypopnea or apnea) of the upper airway during sleep, which causes hypoxemia, hypercapnia and repeated fragmentation (1,2,3). Clinically, these physiopathological changes are reflected in permanent daytime fatigue, headache, depression, poor work performance and lack of concentration. All this deteriorates the quality of life of patients who have the syndrome (4,5). The prevalence of this syndrome has increased in recent years (6,7,8,9,10), which has made it a public health problem (2,11). In addition, OSAHS is associated with multiple cardiovascular, metabolic and psychosocial complications that affect the quality of life (12,13).

For the preparation of this article, a search of scientific literature was made in the following databases: ClinicalKey, Ovid, ProQuest, PubMed, ScienceDirect y SciELO.

Obstructive Sleep Apnea-hypopnea Syndrome and Quality of Life

The most common manifestations of the patient with OSAHS are daytime sleepiness, nocturnal roncopathy and awakenings related to shortness of breath or respiratory effort (14), although irritability, difficulty concentrating, impaired memory, low energy for daily activities, chronic headache and depressive symptoms are also frequent (15). In addition, in patients with OSAHS there is a short-term increase in occupational and car accidents (16). All these conditions are directly related to the patient's quality of life, and not only to cardiovascular and metabolic alterations (7,17).

All these symptoms are added to problems in the relationship with the partner, and an increased risk of car accidents and related comorbidities. This has made this a disease with high costs and a high impact on health and on the quality of life (5), which is defined as the representation of the functional effect of a disease and its treatment in the patient's perception (18).

The degree to which the quality of life is affected is not directly proportional to the severity of the apnea (19); this highlights the importance of quantifying the impact of the disease on the quality of life, without severity being the determining marker. However, the treatment is related to the impact in the patient's daily life; due to this, it is necessary to measure the impact that both the disease and the therapeutic measures have on the patient's quality of life (18,20).

Quality of Life Measurement Scales with the Syndrome

Quality of life is one of the basic points when evaluating health care, as it is important to know the way it is affected and to develop the necessary instruments to measure it objectively.

Tools or scales are used to measure a complex phenomenon not directly observable; to perform the measurement, the phenomenon is broken down into groups of systems or manifestations that are constant, called domains, and through items a strategy is developed to measure them (20).

There are two different groups of scales to measure the quality of life of people with OSAHS: the first includes generic scales, used for other diseases. Their usefulness lies in the fact that several types of pathologies can be compared; however, when evaluating a specific disease such as OSAHS, sensitivity is lost (4,18). Among these scales, the SF36, a 36-item questionnaire that assesses physical functioning, body pain, vitality, social functioning and mental illness has been used. It has the advantage that,

together with its abbreviated version, the SF12, have been validated for more than a decade (21,22). This questionnaire is the one most used in studies to validate specific scales of quality of life. There are other types of generic scales, such as the Nottingham Health Profile, Sickness Impact Profile (SIP), the Functional Limitations Profile (FLP) and EuroQol (EQ-5D), which evaluate items similar to the aforementioned scale , but with yes or no dichotomous answers, in which information can be lost (4,15,18).

The second group of instruments to assess the quality of life in OSAHS are the specific ones, among which is the Functional Outcomes of Sleep Questionnaire (FOSQ). This is a self-administered questionnaire, whose purpose is to measure the impact of drowsiness in daily activities: eating, cleaning the house, performing simple calculations, concentrating on an activity, driving, remembering information, carrying out recreational activities, productivity, social interaction and sexual relations; however, although it has a good validity, the fact that it focuses on inquiring about a symptom in all activities limits its use (4,6,18).

The Obstructive Sleep Apnea Patient-Oriented Severity Index (OSAPOSI) is a questionnaire based on a semi-structured interview that seeks to identify the physical, functional and emotional consequences of OSAHS and its treatment. It consists of 32 questions that are rated from 0 to 5, depending on the magnitude of the problem; however, its reproducibility and internal consistency have not been documented (23).

The Calgary Sleep Apnea Quality of Life Index (SAQLI) is also a specific questionnaire for OSAHS that measures domains such as daily functioning, social and emotional interactions and symptoms; the last domain of this questionnaire deals with possible adverse events to the treatment, which are evaluated by means of Likert-type scales of 7 points, being 1 the maximum deficiency, and 7, the one without deficiency. This makes SAQLI more objective in the evaluation of patients with OSAHS. These findings were confirmed by the World Health Organization (24,25,26).

The aspects deemed necessary to evaluate OSAHS can be summarized in six domains (5):

Daily activities. Within the component of daytime functioning or daytime symptoms is the greatest number of coincidences within the scales developed to measure health-related quality of life in patients with OSAHS (9). The hypersomnia generated by the disease has an important impact on patients' lives. All studies agree that the following aspects significantly affect patients: non-restorative sleep, excessive fatigue, difficulty to stay awake, difficulties with memory and with keeping attention, falling asleep suddenly, malaise upon awakening and lack of concentration (14,16,27). This domain also seeks to identify the participation in activities and the limitation in these. It is evident that patients suffering from OSAHS face several problems in terms of mobility and work, or in engaging in recreational activities such as exercise and other relaxing activities (28).

Social relationships. The perception of individuals of their cultural context or the relations they maintain with society in terms of their projects and expectations are definitive markers of well-being (14). The following aspects limit the social life of patients with OSAHS: the constant struggle against the urge to sleep, the need to nap, the difficulty to stay awake while reading, social activities, driving a vehicle, the feeling of having to make a greater effort to develop activities, as well as greater limitations in school and work performance (23).

State of mind. It refers to the feeling of impatience, always feeling unable to regain strength, anxiety or depression, and a constant concern about their health (4,29). In addition to the discomfort that the patient feels to affect the sleep of his/her partner, the reluctance to spend the night with friends due to snoring, the lack of interest in leaving and the concern for bothering others cause isolation, as well as social and emotional limitation (10).

Symptomatology. General symptoms and not only those directly related to the disease, such as roncopathy, excessive fatigue or drowsiness that affect the patient, are additional causes of deterioration, including chronic headache and

gastroesophageal reflux, which increases with OSAHS (15,30).

Symptoms related to the treatment. It has been widely documented that less than 50% of patients with indication of continuous positive airway pressure use adhere adequately to the treatment. Its use is not optimal, due to the reluctance of the patients to this type of treatment, its time of use and its side effects (15,31,32). This point is fundamental, since in any pathology it is important to evaluate the possible side effects of the treatment, which limit treatment adherence or are harmful for the patient (33).

Impact of the treatment. After confirming the diagnosis and prescribing a specific treatment, it is important to quantify the impact on the patient with respect to the improvement in the symptoms and general well-being (11).

The most complete and widely used instrument in the world is the SAQLI scale, which individualizes and takes into account the direct aspects that affect patients with this disease; in addition, it includes a domain of response to treatment and its possible adverse effects, something that none of the other scales considers (6). The SAQLI scale is validated in several languages, including Lithuanian, Chinese and Spanish; however, the Spanish language used in the Iberian Peninsula may have words that are not known in our language, so it is necessary to verify their meaning in Latin American countries (7,17). In Colombia we do not have any validated tool adapted to our language, which allows measuring how the quality of life of patients with OSAHS is affected, as well as the response to treatment.

Conclusion

The importance of measuring the quality of life derives from the fact that the definition of the concept of health is dynamic and multidimensional. It is based on a biopsychosocial projection of the individual, taking into account the positive and negative values that affect our life, social functionality and perception. Since OSAHS chronically affects sleep and produces multiple cardiovascular and neuropsychiatric alterations, such as depression and cognitive dysfunction, it is necessary to have tools to assess the quality of life in this type of patients.

Among the tools currently available, the SAQLI scale is the most appropriate for evaluating different quality of life items, in addition to measuring the impact that the treatment has on the quality of life.

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