Collateral Damage

The Effects of Obstructive Sleep Apnea on Bed Partners

While health-related problems have a definite and identifiable effect on patients, the patients’ families are also very much affected. This may reach such a level of intensity that the patient will present to a physician because their family desires that they be evaluated and treated. Most clinicians would agree that sleep apnea is one of those conditions that stimulates familial assertion. The dynamics and repercussions of these encounters on the doctor-patient relationship and the doctor-family relationship may be staggering. The willingness and compliance of a patient with treatment may be a result of familial coercion.

The effect of medical illness on families has been studied in a wide variety of diseases, varying from pediatric cancers to mental illness. Quality-of-life scales and indexes also have been developed but have focused mainly on the patients. Five different categories of measurement can be performed. Measures can be generic, disease-specific, population-specific, dimension-specific, or of utility. One such generic scale is the short form-36 (SF-36). This 10-min general health survey looks at the patient’s self-report of the physical and mental distress of having a specific medical illness. The physical component examines physical functioning, role-physical (accomplishment), bodily pain, and general health. The mental component examines vitality (energy), social functioning, role-emotional (accomplishment), and mental health. The reliability and validity of this scale for patients to compare the effect of interventions has been confirmed. The benefit of using such a generic scale, is that the effect of an illness on a patient can be compared against the effect that other diseases have on patients and against national normative values.

A population-specific scale that also can be used for patients with daytime sleepiness, including those with obstructive sleep apnea, is the Epworth sleepiness scale. This is an eight-item questionnaire that asks patients to rank their drowsiness and likeliness to fall asleep in different routine situations (for example, while watching television). While the utility of this scale as a subjective assessment of daytime sleepiness has been established, it has not correlated well with objective measurements. Our current objective measurements of sleepiness may, however, benefit from adjustment. Finally, a disease-specific scale has been created to assess patients with sleep-disordered breathing. The Calgary sleep apnea quality of life index (SAQLI) was designed at the University of Calgary in 1997. It was based on one-on-one interviews with 40 sleep apnea patients who were asked about the effect of sleep apnea on their life. Specific problems were identified, and were ranked by frequency and importance.

When the SAQLI was distributed to 100 sleep apnea patients, patients were able to express their frustration and concerns about having sleep apnea. Many complained of a lack of energy and the need to force themselves to accomplish daily routine tasks. There were similar concerns about how bothersome their snoring was to their bed partner. Feelings of depression also surfaced. These complaints then were organized into the following four domains: role functioning; social interactions; emotional functioning; and symptoms. The measurement of the specific effect of sleep apnea and its treatment on the bed partners of patients with sleep apnea is the focus of an article in this issue of CHEST (see page 942) by Parish and Lyng from the Mayo Clinic in Scottsdale, AZ. In this article, while there was significant drop-out from the lack of tolerance for treatment with continuous positive airway pressure (CPAP), 54 patients and their bed partners were studied via questionnaires before and after 6 weeks of unmonitored CPAP treatment. The instruments used included the SF-36, the Epworth sleepiness scale, and the Calgary SAQLI. While none of these instruments are designed for the evaluation of the bed partners of sleep apnea patients, they still provide some measure of daytime symptoms and general health.

Previous studies have examined the quality of sleep of bed partners, but this study is novel in that it evaluates daytime functioning and general health. Furthermore, it shows improvement in both with treatment. One of the first published articles looking specifically at how bed partners were affected by patients with sleep apnea was published by Beninati et al7 from the Mayo Clinic. Beninati and colleagues studied 10 married couples with one partner suspected of having sleep apnea due to snoring. Both partners underwent simultaneous sleep studies, with the partner with sleep apnea receiving a split study with CPAP titration during the second portion of the night. Patients in this study had an average apnea-
The recent most study of partners of patients with sleep apnea and CPAP treatment was performed by McArdle and colleagues. They studied 49 couples with one partner having sleep apnea in a prospective, randomized, crossover trial with a placebo control. Patients and partners were assessed preintervention and postintervention using the Pittsburgh sleep quality inventory, the SF-36, and a short house questionnaire rating sleep disturbance secondary to their apneic partner’s snoring, apneas, and restlessness. Monitoring of compliance with CPAP treatment and home polysomnographic monitoring were performed. Interestingly, there was no objective change in the bed partner’s sleep quality, in self-reported general health status, or in marital satisfaction. There were, however, significant subjective, self-reported changes in the bed partner’s sleep quality and health status between the treated and untreated groups. The fact that many of the patients in this study reported that they had sought treatment at the request of their bed partner also may have biased this study.

From these studies, it can be easily concluded that the social impact of the obstructive sleep apnea and its treatment goes far beyond that of the individual patient with sleep apnea. When one considers the widespread prevalence of sleep apnea, the cost of CPAP treatment, and the difficulties in maintaining compliance with such therapy (despite the overwhelming amount of evidence as to the benefit of such therapy on cardiovascular prevention—eg, stroke, heart attack, and hypertension—and mortality), the influence and role of the bed partner in medical management is clear. The fact that the bed partner may be the main reason that a patient seeks therapy, also may be the main reason that a patient continues with therapy. Therefore, the effect of CPAP treatment on a bed partner’s subjective and objective physical, mental, and emotional health may be of the utmost importance. The uniqueness of the study by Parish and Lyng is that it examines the impact of CPAP treatment on the bed partner. None of the previous studies have looked at this particular aspect of therapy. It is essential that further studies of these treatment dynamics are performed, as this may be one of the most cost-effective and efficacious ways to improve not only patient compliance and general health, but the impact of the application of health-care treatments on society as a whole. Sleep apnea should be considered a community “health problem,” impairing the quality of life and well-being of not only the individual patient, but the entire family and society.

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Secondary Spontaneous Pneumothorax

Catamenial Pneumothorax

The article by Alifano et al in this issue of CHEST (see page 1004) revisits a very interesting cause of secondary spontaneous pneumothorax, that of catamenial pneumothorax. As outlined in the article, this is a pneumothorax that is usually right sided and occurs in women within 72 h of menstruation. This