

Podcast of the Journal of Clinical Sleep Medicine

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Welcome to the regular podcast of the *Journal of Clinical Sleep Medicine*. I am Dr. Stuart Quan, editor of the *Journal*. These podcasts are a regular feature of each issue of the *Journal* and can be downloaded at the *Journal's* website. Each podcast features summaries of important articles published in the current issue of the *Journal*, as well as occasional interviews with authors of these papers.

The lead article in this issue of the *Journal* is entitled, "Outcome of CPAP Treatment on Intimate and Sexual Relationships in Men with Obstructive Sleep Apnea," by Drs. Reishtein, Maislin, Weaver, and the multi-site study group from the University of Pennsylvania in Philadelphia, Pennsylvania. When one reviews presenting symptoms in patients with obstructive sleep apnea, one symptom that is commonly cited is impotence. Although most patients present to their physicians with symptoms of daytime sleepiness and loud snoring, on occasion, a patient will present with a complaint of impotence. As noted by the authors, intimate and sexual relationships are important aspects of human life. However, with respect to sleep apnea, the impact of impotence has not been well described. In this study, 123 male patients with obstructive sleep apnea having an apnea-hypopnea index greater than 20 and being 21 to 60 years old underwent polysomnography, multiple-sleep latency testing and completion of the Epworth Sleepiness Scale and the Functional Outcomes of Sleep Questionnaire before and three months after being started on continuous positive airway pressure treatment. In general, the subjects were obese with a body mass index of 37.59 kg/metered square and they had a mean age of 46.35 years. The mean apnea-hypopnea index before starting treatment was quite high at 66.9. Almost all of the participants were married. Before starting treatment, with respect to four aspects of intimacy and sexual relationships, 69% reported difficulty with desire, 63% with intimacy, 46% with arousal and 29% with orgasm. After using CPAP, there was improvement in all four of these domains with desire being reduced to 40%, intimacy 34%, arousal 2% and orgasm 18%. In addition, the baseline score on the intimate-sexual relationships portion of the FOSQ showed that at baseline it was 3.17 and increased to 3.62 which was an effect size of 0.61 and highly significant. The authors concluded that obstructive sleep apnea has an adverse impact on intimate and sexual relationships and this improved with CPAP therapy.

In an editorial accompanying this paper, Dr. James Parrish from the Mayo Clinic in Scottsdale notes that despite improvement in intimacy and sexual function, scores did not return to normal suggesting that other factors were involved in impair-

ment in these individuals. He suggests that male sexual dysfunction is associated with a variety of issues. He notes that snoring by itself can contribute to sexual relationship dysfunction. Furthermore, he suggests that other factors such as older age, obesity, and a number of other medical conditions as well as medications could be contributing to the sexual dysfunction in patients with obstructive sleep apnea.

The next paper to be highlighted in this podcast is entitled, "Comparison of Positional Therapy to CPAP in Patients with Positional Obstructive Sleep Apnea," by Drs. Permut, Diaz-Adad, Chatila, Crocetti, Gaughan, D'Alonzo and Krachman from Temple University in Philadelphia, Pennsylvania, the University of Maryland in Baltimore, Maryland and Abington Memorial Hospital in Abington, Pennsylvania. Some patients with obstructive sleep apnea have their apneic and hypopneic episodes almost exclusively when they are laying on their back. Thus, measures to promote sleeping in the non-supine position may be beneficial in these patients. In this paper, the authors studied 38 patients with positional obstructive sleep apnea. They were randomly assigned to a proprietary positioning device or a night on CPAP. The positioning device is constructed of lightweight, semi-rigid synthetic foam and its manufacturer is listed in the published article. The patients had relatively mild obstructive sleep apnea with an apnea-hypopnea index of 13 events/hour of total sleep time overall with an index of 31 in the supine position and two when non-supine. The authors found that the positioning device was effective in normalizing the apnea-hypopnea index to less than five in almost all participants. In addition, the percentage of total sleep time in the supine position decreased from 40% to 0% with the positioning device. The authors conclude that positional therapy was found to be effective in the treatment of these patients and was similar to CPAP. It should be noted, however, that these patients by and large had relatively mild obstructive sleep apnea.

The next paper to be highlighted in this issue of the *Journal* is entitled, "Endothelial Function in Patients with Post-CPAP Residual Sleepiness," by Drs. El-Solh, Akinnusi, Moitheennazima, Ayyar and Relia from the Veteran's Affairs Western New York Healthcare System in Buffalo, New York and the State University of New York at Buffalo School of Medicine. Some patients with obstructive sleep apnea who are treated with continuous positive airway pressure remain sleepy despite control of their sleep-disordered breathing. In addition, patients with obstructive sleep apnea have been found to have impairment in endothelial function. In this study, the authors investigated whether patients with residual excessive sleepiness despite

treatment for obstructive sleep apnea continue to have evidence of endothelial dysfunction. They studied flow-mediated dilation of the brachial artery as an index of endothelial dysfunction in 12 CPAP-compliant patients with residual sleepiness, 12 CPAP-compliant patients without residual sleepiness and 12 control subjects. In addition, serum concentrations of C-reactive peptide, tumor necrosis factor alpha and IL6 were measured. The authors found that both flow-mediated dilation as an index of endothelial function as well as levels of inflammatory mediators were the same among all groups. They conclude that residual excessive daytime sleepiness is not necessarily a risk factor for cardiovascular disease in adequately treated patients with obstructive sleep apnea.

The final article to highlighted in the podcast is entitled, "Effect of Acute Physical Exercise on Patients with Chronic, Primary Insomnia," by Drs. Passos, Poyares, Santana, Garbuio, Tufik and Mellow from Universidad Federal de Sao Paulo in Sao Paulo, Brazil. In this paper, the authors described a study in which they compared the effects of three different modalities of physical exercise on the sleep pattern of patients with chronic, primary insomnia. They studied 48 insomnia patients, 38 of whom were female with a mean age of 44.4 years.

The subjects were randomly assigned to four groups: control without physical exercise, moderate-intensity aerobic exercise, high-intensity aerobic exercise, and moderate-intensity resistant exercise. They were studied by polysomnography and daily sleep logs, as well as an anxiety scale before and after exercise. The authors found that in the moderate aerobic exercise group there was a reduction in sleep latency, total wake time and an increase in total sleep time. In addition, there were improvements in the total sleep time and a reduction in sleep latency on the daily sleep log diaries. The improvements in sleep efficiency corresponded to a reduction in anxiety. The authors conclude that acute, moderately-intensive aerobic exercise appears to reduce pre-sleep anxiety and improves sleep in patients with chronic, primary insomnia. These data are consistent with epidemiologic studies in which sleep complaints appear to be less in individuals who engage in regular physical activity.

This concludes the regular podcast of the *Journal of Clinical Sleep Medicine*. The listener is encouraged to read the contents of the *Journal* for additional information regarding each of the articles summarized in this podcast, as well as other papers published in this issue of the *Journal*.