



Clinical Review

Sleepiness scale predicts sleep apnoea

An Italian investigation has studied whether it is effective to screen for obstructive sleep apnoea in general practice. It looked at patients with high blood pressure and obesity.

The study involved three GPs in a single practice. They used the Epworth Sleepiness Scale with their patients who had hypertension and BMI over 30kg/m² but no respiratory or neurological disease. Those patients with a score >11 on the 24-point scale were investigated further with polysomnography and 24-hour ambulatory BP

Con

After screening 220 people, 31 were investigated. Tests confirmed obstructive sleep apnoea in 30 of them. Those with sleep apnoea were prescribed continuous positive airways pressure (CPAP). After 12 weeks their mean score on the sleepiness scale had decreased by a significant five points. Mean blood pressure also reduced during the day and night with CPAP.

Comment

The association between hypertension and obstructive sleep apnoea is well known. How to identify which patients have the problem is less clear. This study used a population in which obstructive sleep apnoea was likely, but the 30 people who had the condition represented only 4% of all hypersensitive patients in the practice. If just hypersensitive patients who are also obese are assessed, the condition will still only be found in 10%.

The Epworth Sleepiness Scale is an Australian tool, which is easy to use. It does not allow sleep apnoea without polysomnography.

Dr John Dowden, Canberra

Di Guardo A et al. Obstructive sleep apnoea in patients with obesity and hypertension.

Br J Gen Pract 2010;60-325-328

Australian Doctor

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Concern Over Home Sleep Study Industry

The growing home sleep study industry is worrying leading sleep physicians, who say under-regulation has left the field open to unscrupulous operators.

With as many as 5% of adults likely to be affected by sleep apnoea, global sales of continuous positive airway pressure (CPAP) equipment are said to be growing at an annual rate of about 15%.

But Professor Ron Grunstein, a sleep physician at Sydney's Woolcock Institute of Medical Research, raised concern that many companies now offering home testing

for sleep apnoea also sold CPAP equipment, potentially creating a conflict of interest.

He said some of these companies were not providing patients with an unbiased medical opinion as to whether they needed treatment, and if so, which treatment was most appropriate for their case.

“We get patients coming in for a second opinion who have never actually seen a doctor about their sleep condition, even though they have had some type of sleep apnoea investigation and have already bought a CPAP machine,” he said.

Professor Grunstein alleged some companies providing sleep tests were essentially “CPAP factories”, and expressed concern that patients may be unlikely to be considered for other therapies such as lifestyle interventions, dental devices or surgery.

Dr Michael Ho, director of Monash Sleep Centre, said the quality of home sleep studies appeared to be highly variable.

“I recently had a patient come to me and say they had been diagnosed with sleep apnoea through a home sleep study, but when I ran a laboratory test it showed that they did not have sleep apnoea,” he said.

Australian Doctor spoke with several companies offering home sleep studies and selling CPAP equipment. They all emphasized their reliance on independent, medically qualified sleep specialists to interpret sleep study results and make diagnoses.

They also claimed that they were helping to tackle significant under-treatment of obstructive sleep apnoea, and said that provided ongoing technical support for CPAP equipment.

But the Australasian Sleep Association expressed concern at what they considered a potential for conflicts of interest in provision of CPAP.

The association’s chair Dr Nick Antic suggested CPAP should be made prescription-only as a first step toward regulating the industry.

As a minimum standard of care, he said all assessments for obstructive sleep apnoea should be made by GPs, specialist nurses or nurse practitioners with a high level of training in obstructive sleep apnoea.

Australian Doctor

19 August 2011

Sleep Apnoea linked to Dementia in women

Older women with sleep apnoea are more likely to develop memory problems and dementia than those who sleep peacefully throughout the night, research suggests. A US study of almost 300 women in their 80s found that those with sleep-disordered breathing were almost twice as likely to develop mild cognitive impairment or dementia over five years’ follow-up.

Periods of oxygen deprivation were more strongly linked to the development of memory problems than women’s overall amount of sleep, or how often they woke during the night.

“Given the high prevalence of both sleep-disordered breathing and cognitive impairment among older adults, the possibility of an association between the two conditions, even a modest one, has the potential for a large health impact,” the researchers said.

They used overnight polysomnography to measure changes in breathing and oxygen flow during sleep, and the frequency of short breaks in sleep.

Just over one-third of women in the sleep study had sleep apnoea at baseline – 45% of which developed memory problems or dementia over the next five years.

This compared with just 35% of women who did not have sleep apnoea at the beginning of the study.

Ron Grunstein, Professor of Sleep Medicine at the University of Sydney, said sleep distribution and lack of oxygen could both contribute to the development of cognitive impairment., noting that sleep played an important role in memory formation.

“Some forms of learning are enhanced by sleep,” he said.

“The hippocampus is very sensitive to a lack of oxygen and this affects how information is acquired and stored.”

The researchers said their findings hinted at a role for supplemental oxygen therapy in older adults with sleep-disordered breathing, however, further studies were needed to evaluate this approach.

Journal of the American Medical Association 2011;306:613-619

MEDISLEEP

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Losing Sleep Doesn't Hurt – Or Does It?

Insomnia may contribute to neuronal loss.

Sleep deprivation has recently been shown to be associated with impaired performance, and short sleepers may be at greater risk for cardiovascular disease than longer sleepers. To investigate the effects of sleep deprivation on neuronal volumes, researchers respectively analysed data from a previous study that examined the relation between PTSD and volumes of the hippocampus and hippocampal subfields.

The researchers correlated magnetic resonance imaging data with validated self-reports of insomnia severity and subjective global sleep quality in 17 otherwise healthy veterans with PTSD and 19 healthy controls. In an analysis controlling for a significant correlation between PTSD and insomnia severity, the latter was the best predictor of low volumes in the CA3/dentate subfield across the entire sample. Poor sleep quality (sleep efficiency, perceived sleep quality and daily disturbed sleep) was also significantly correlated with lower CA3/dentate volume.

COMMENT

Interpretation of this result is limited to by the analysis of data obtained for another purpose and by the use of self-reports rather than sleep laboratory measures. Still, because sleep promotes neurogenesis and hippocampal cell survival, an adverse effect of insomnia on these functions is not far-fetched. Treatments that improve insomnia in patients with PTSD or other conditions might also be neuroprotective. However, future animal studies and demonstrations of beneficial effects of non-pharmacological insomnia treatments on hippocampal volume would strengthen these authors' conclusions. – **Steven Dubovsky, MD**

Neylan TC et al. *Insomnia severity is associated with a decreased volume of the CA3/dentate gyrus hippocampal subfield.* **Biol Psychiatry** 2010 Sep 1;68:494.