



SLEEP DISORDER ADDS TO DISEASE BURDEN



Chris Bateman prepares for a sleep apnoea study.

A lack of training in the recognition and treatment of obstructive sleep apnoea has led to one in 20 adults in Western countries being undiagnosed. In South Africa the condition is even less well known and has dramatic public health implications.

Sleep apnoea increases the risk of hypertension, cardiovascular disease, strokes, daytime sleepiness and vehicle accidents.

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Dr Ricky Raine who runs the sleep laboratory at the UCT Lung Institute, said that one US study of 4 000 people found that 93% of sleep apnoea cases were undiagnosed among men and 82% among women. He believes this is 'probably very similar' in South Africa but there is a worrying lack of research.

American studies have shown that black citizens have a 2.5 times greater

chance of having 30 episodes of obstructive apnoea and hypopnea per hour than their white compatriots.

The SAMJ tracked down a Wits University study that showed that 9% of 102 Gauteng truck drivers displayed signs of sleep apnoea, while 23% reported regular snoring.

Wits physiologist and author of the study, Claudia Maldonado, said the larger drivers reported being less alert at the start of their trips. She also reported positive correlations between the sleep apnoeacs and vehicle accidents, a finding backed up by insurance companies who report a 2-5 times higher road accident rate among apnoeacs.

According to Dr Alison Bentley, chief clinician at the Wits Sleep Laboratory, 40% of sleep apnoeacs have arrhythmias at night, yet cardiologists seldom referred patients to her.

'It's strange because some of them witness dramatic improvements in their post-infarction patients after a period of continuous positive airway pressure (CPAP) use. It's in the cardiovascular literature,' she observed.

Doctors most likely to encounter sleep apnoea include anaesthetists, psychiatrists, dieticians, pulmonologists, neurologists and ENT surgeons. Lack of knowledge or incorrect interventions risk unnecessary patient suffering.

An SAMJ snap survey of pulmonologists, neurophysiologists and a sleep apnoea support group, revealed alarming evidence of medical ignorance and 'short-sighted' lack of support from medical aid schemes.

Bentley says Canadian studies show that after sleep apnoea patients were treated with CPAP machines, they used 'significantly less' health care resources.

Besides an eight times greater chance of stroke, the lesser known effects of the condition include changed insulin

structure and a slowing of the basal metabolic rate.

Dr Luke Krige, a Port Elizabeth pulmonologist, added that 'the psychosocial effects are also pretty bad. People fall asleep at work and output drops along with their cognitive ability, memory and concentration.'

'Their partner becomes a nervous wreck. He or she keeps thinking they'll wake up next to a corpse because of the dramatic non-breathing spells.' Some couples also avoid socialising because of the sleep-deprived person's somnolence. Some patients end up on antidepressants, without the underlying cause being found.

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When the patient is correctly diagnosed using a polysomnogram and begins treatment (usually on a CPAP machine), changes in energy and lifestyle are 'nothing short of miraculous'.

Krige said he doubted he'd 'ever seen patients as grateful as properly treated sleep apnoea patients. It literally changes their lives'.

He says the condition is taken so seriously in the USA that the American College of Cardiology insists that a sleep study be done when no other good reason for myocardial infarction can be found.

Annette van Rensburg is the founder of South Africa's only Sleep Apnoea Support Group, which has become a resource for both doctors and patients.

She has advised thousands of affected South Africans since nearly losing her husband to the disease 11 years ago. Concern for her husband resulted in one doctor angrily calling her a



'hypochondriac' and prescribing sleeping tablets for her.

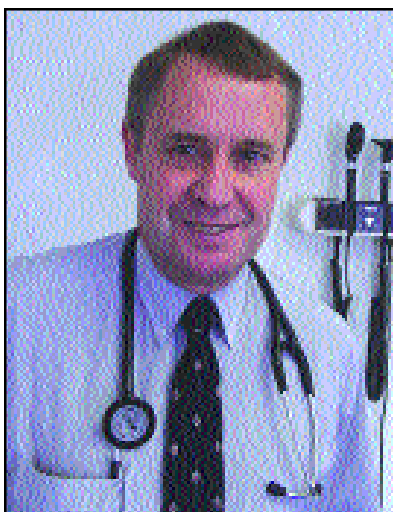
She counted 37 non-breathing spells in her husband, some lasting over a minute, during one hour. His oxygen levels were later found to have fallen to 57%. The 15 kg overweight man later suffered a heart attack and was rushed to St Augustines in Durban where cardiologists failed to recognise sleep apnoea.

'They said he was overworked and stressed and prescribed beta-blockers, tranquilisers and sleeping tablets - it nearly killed him,' she said.

After seeing a 1991 television program featuring Wits University research on sleep disorders, Van Rensburg had her husband evaluated at the Johannesburg Kensington Clinic, imported a CPAP machine and watched him 'turn from grey to bright pink overnight - it was miraculous and he's never looked back'.

Van Rensburg, Bentley, Krige and clinical neurophysiologist Peet Vermaak, agree that the insistence by medical aids and some doctors on patients first losing weight misses the primary point of CPAP intervention.

Van Rensburg questioned where the patients 'get the energy from to



Dr Ricky Raine

exercise', adding that the anxiety caused by the condition often led to patients eating more.

Vermaak said the condition slowed the basal metabolic rate, causing a 'vicious cycle in which the patient picks up more weight and thus sleeps less'.

Raine cited five main interventions for sleep apnoea, but confirmed the CPAP machine (which comes in various levels of automated sophistication) as the 'gold standard'.

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The other interventions included maxillofacial surgery to set the jaw further forward to open the throat (best indicated in younger patients), palate modifying surgery, somnoplasty (an amputation of the base of the tongue) and a tracheotomy - guaranteed but not well tolerated, with a high risk of infection and orthodontic 'gumguard-like' appliances which also brought forward the lower jaw.

The condition has pitted some ENT surgeons and pulmonologists against each another and lively debates often mark sleep disorder seminars.

Van Rensburg cites 'among hundreds of complaints,' the case of a man who, after two operations to his tongue and soft palate, was worse off than before. He began slurring his speech, drooling, and lost all taste, smell and eventually, his job. He died two years later, suffocating among some pillows on the floor. 'No - we advise people to stay away from the ENTs,' she asserted.

Krige, who says the majority of his referrals come from physicians, advises GPs confronted with tired patients to probe sleeping habits. 'If he snores, get the wife in and if there's a disturbance in his sleep pattern, have a sleep study done.'

Michelle Baker, a Durban neurophysiologist, found that 60% of high compliance CPAP users in a three-year study reported dramatic relief to daytime sleepiness, restlessness, breath holding, concentration and early-morning headaches.

Patients with high apnoea/hypopnea indexes did better and were more compliant than those with lower indexes. There was also a marked drop in the 'spousal arousal syndrome' - spouses of the sleep apnoea sufferer were woken far less frequently when their partner used the machine.

A total of a dozen sleep study facilities operate in the major centres - in marked contrast to the USA and Canada where 14 can often be found in a single medium-sized city.

Krige cited one of his severe cases in which he attempted to persuade a medical aid to pay for a R5 000 CPAP machine. 'They refused and said he must lose weight - now he's had an infarction and it'll cost them R200 000'.

Bentley said that in spite of medical aids 'seeming to be increasingly resistant,' some had been persuaded to pay for renting a CPAP machine for three months, provided it was accompanied by a full report, before shelling out money for a machine.

Dr Maurice Goodman, head of clinical marketing for Discovery Health, said his company funded CPAP devices for clients with comprehensive cover who had a confirmed polysomnography diagnosis and had tried the machine out for one month. Evidence of compliance was important as 'patient compliance is typically not very good'. Money was paid out of the client's medical savings account.

Good news regarding this issue is that the Colleges of Medicine and the SASleep Society are now collaborating to create a diploma in sleep orders from July 2003.

Chris Bateman