Sleep apnoea in ESRD patients: a review of evidence

Sir,

I read with great interest the article by Sabbatini et al. [1] on the prevalence of insomnia in maintenance haemodialysis patients. I was, however, struck by the absence of patients with a diagnosis of sleep apnoea in the current article. The prevalence of sleep apnoea in chronic renal failure is estimated to be around 50–70% [2]. Conventional haemodialysis does not reduce the prevalence of sleep apnoea, though renal transplantation has been reported to correct obstructive as well as central sleep apnoea [3,4].

In a recent article by Hanly and Pierratos [5], seven patients with sleep apnoea undergoing nocturnal haemodialysis were noted to have a lower apnoea–hypopnoea index compared to conventional haemodialysis.

The aetiology of sleep apnoea in ESRD patients has been thought to be due to central destabilization of ventilatory control and upper-airway obstruction. The 65% of night-time awakening noted in the paper by Sabbatini et al. [1], as well as 41% of day-time sleepiness (Table 4 in their paper), could be due to under diagnosed sleep apnoea syndrome.

Using the Epworth sleepiness scale [6] as a screening tool one can identify patients at high risk of sleep apnoea and refer to a sleep specialist for a polysomnogram. The Epworth sleepiness scale is a numerical scale (0–3) estimating the chance of dozing with activities like sitting and reading, watching TV, sitting inactive in a public place, lying down to rest in the afternoon when chance permits, sitting and talking to someone, sitting quietly after lunch without drinking alcohol, and sitting in the car while stopped in traffic. A score of 10 should be followed up by referral to a sleep centre.

Mayo Clinic
Amit K. Ghosh
Rochester, MN
USA
Email: ghosh.amit@mayo.edu

6. Johns MW. Sleepiness in different situations measured by the Epworth sleepiness scale. Sleep 1994; 17: 703–710

Reply

Sir,

The diagnosis of sleep apnoea is based upon polysomnography, the correct way to record the prolonged and frequent cessations of breathing which characterize this sleep disorder (more than 10 s up to 100 times per hour throughout the night) [1]. Unless such an examination is performed, many authors prefer to talk about ‘stop breathing’ episodes, as perceived by the patient or described by the bed-partner [2]. We were aware of the considerable incidence of respiratory problems affecting sleep in uraemic patients and, indeed, two further points of our questionnaire [3] dealt with the occurrence of breathing problems that were able to wake the patient up, and with the presence of snoring, often associated with sleep apnoea. We found that 21% of our patients with insomnia complained of ‘stop breathing’ episodes, and this disorder was also present in 15% of our ‘control’ group, whereas the prevalence of snoring was 40 and 32%, respectively. These values are not different from those observed by others [2,4,5]; nevertheless, we decided not to report them in our study because of the subjectivity of the answers from patients (bed-partners were not surveyed), and consequently the possibility of underestimating the phenomenon. Hallet et al. [6] reported the presence of sleep apnoea, diagnosed by polysomnography, in about 80% of their uraemic patients on both haemodialysis and peritoneal dialysis. Indeed, the real incidence of this disorder is far from clear, since these latter data may largely be explained by a bias in the selection of patients, and probably overestimate the problem. The occurrence of sleep apnoea, however, must be considered and tested in uraemic patients with sleep disorders, because of its serious cardiovascular implications, as recently reviewed by Zoccali et al. [7]. From this point of view, performing the Epworth sleepiness test to screen patients with sleep respiratory problems could be considered an easy and useful method for the diagnosis, before performing further steps such as overnight arterial oxygen saturation, monitoring of nasal airflow, and polysomnography.

University ‘Frederico II’
Massimo Sabbatini
Department of Nephrology
Naples, Italy
Email: sabbatin@unina.it