Do sleep disorders start in dialysis or in early chronic kidney disease?

Sir,

Merlino et al. [1] recently reported a high presence of sleep disorders in 883 patients on maintenance dialysis. They showed the presence of insomnia in 69.1%, restless leg syndrome (RLS) in 18.4%, obstructive sleep apnoea syndrome in 23.6%, excessive daytime sleepiness in 11.8%, possible narcolepsy in 1.4%, sleepwalking in 2.1%, nightmares in 13.3% and possible rapid eye movement behaviour disorders in 2.3% of patients.

We agree with the authors that this is an important finding in the largest sample of dialysis patients. However, while frequently described in dialysis patients, these disorders—water withdrawal, dialytic urea removal and patient comorbidities—have not been sufficiently clarified.

We recently finished a study in 88 patients in good nutritional condition, with normal haemoglobin levels, good control of blood pressure and optimal dry weight [2]. This study used a 26-item questionnaire based on the Diagnostic and Statistical Manual of Mental Disorders, and it showed that sleep disorders were observed in 77.3% of the patients. There was no difference in body fluid and urea withdrawal between patients with no disturbance, subclinical disorders and insomnia. The Charlson Comorbidity Index was significantly lower ($P < 0.001$) in patients with no disturbance than in patients with subclinical disorders or insomnia and emerged as strongly associated with sleep disorders (Figure 1). This study also shows that age, dialysis and anti-hypertensive drugs play a predictive role (Figure 2) [2]. Our data indicate that in evaluating sleep disorders in patients on dialysis, comorbidities should be assessed.

Several studies have been performed in dialysis patients, but few studies have been performed in patients with chronic kidney disease (CKD). More recently, we demonstrated that sleep disorders are present in 80.7% of 52 patients with early CKD (Table 1) [3]. This finding, which needs to be confirmed in a larger cohort of patients, indicates that sleep disorders affect the lives of patients with CKD as soon as a diagnosis of disease potentially progressing to end-stage renal disease is made. Preliminary data indicate that patients even at the very beginning of CKD are stressed, since they realize the possibility that they are beginning a machine-dependent life.

In conclusion, we agree with Merlino et al. [1] that the prevalence of sleep disorders is high in dialysis and that they have a significant negative impact on the functional health status and quality of life; and we highlight the high prevalence of the sleep disorders in early CKD.

Conflict of interest statement. None declared.

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Fig. 1. Charlson Comorbidity Index in HD patients with sleep disorders. NO: disturbance; SUB: subclinical disorders; I: insomnia.

Fig. 2. Age (years) and dialysis (months) in HD patients with sleep disorders. NO: disturbance; SUB: subclinical disorders; I: insomnia.

Table 1. Frequency of sleep disorders in CKD

<table>
<thead>
<tr>
<th>Sleep disorder</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep latency &gt; 30 m</td>
<td>42.6</td>
</tr>
<tr>
<td>Frequent awakenings</td>
<td>62.9</td>
</tr>
<tr>
<td>Early awakenings</td>
<td>57.4</td>
</tr>
<tr>
<td>No refreshing sleep</td>
<td>50</td>
</tr>
<tr>
<td>Snoring</td>
<td>12.9</td>
</tr>
<tr>
<td>Sleep apnea</td>
<td>7.4</td>
</tr>
<tr>
<td>Snoring + sleep apnea</td>
<td>1.8</td>
</tr>
<tr>
<td>Nightmares</td>
<td>29.6</td>
</tr>
<tr>
<td>Somnambulism</td>
<td>7.4</td>
</tr>
</tbody>
</table>

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