

A Case-Control Study on Restless Legs Syndrome in Non-Dialysed Patients with Chronic Renal Failure

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Restless Legs Syndrome (RLS) is a possible consequence of end-stage renal disease. However, conclusive data on the association between RLS and chronic renal failure (CRF) in non-dialysed patients are still lacking. The aims of this study were: *i*) to look for an association between RLS and CRF in non-dialysed patients; *ii*) to analyse the characteristics of RLS and its consequences on nocturnal rest in non-dialysed patients with CRF; *iii*) to identify possible predictors of RLS occurrence in non-dialysed patients with CRF.

We recruited 138 non-dialysed patients with CRF and 151 controls. An expert in sleep medicine investigated the presence of RLS by means of a face-to-face interview. Fifteen non-dialysed CRF patients and 5 controls were diagnosed as RLS affected. A multivariate analysis confirmed that RLS was independently associated with CRF in non-dialysed patients ($p = 0.004$). In these patients symptoms were characteristic of secondary RLS and compromised nocturnal rest, resulting in excessive daytime sleepiness. Independent predictors of RLS in non-dialysed CRF patients were: female sex (OR: 6.3, 95% CI: 1.6 – 25.1, $p = 0.008$) and percentage of transferrin saturation (OR: 0.7, 95% CI: 0.5 – 0.9; $p = 0.03$).

This is the first case-control study able to recognize an association between RLS and CRF in patients not yet on dialysis. Nephrologists should investigate and treat RLS in their non-dialysed patients with CRF. In particular, physicians should carefully investigate women and patients with iron deficiency for the presence of RLS symptoms.