

SLEEP DISTURBANCE IN PATIENTS TREATED WITH MAINTENANCE HEMODIALYSIS AND HEMODIAFILTRATION

Vincent Bourquin¹, Pierre-Alain Triverio², Marc Giovanini³, Dominique Robert³, Pierre-Yves Martin¹ and Patrick Saudan¹
 Service de Néphrologie¹, Hôpitaux Universitaires de Genève, Switzerland; Service de Dialyse, Hôpital de Sierre³, Switzerland; Service de Dialyse, Hôpital de la Providence³, Neuchâtel, Switzerland.

OBJECTIVES

Sleep disturbance and symptoms such as restless leg syndrome (RLS) and pruritus are common in patients with end-stage renal failure. The aim of this study was to determine the prevalence of these symptoms in our dialysed patients and whether there is a decreased prevalence in patients treated with on-line hemodiafiltration.

TABLE

Variables	HD* n=63	HDF* n=17	h-e HDF* n=21	P-value
Age mean (SD)	68 (13)	63 (13)	66 (17)	0.45
Male gender (%)	65	69	62	0.91
BMI mean (SD)	26 (6)	26 (6)	26 (4)	0.97
Dialysis vintage median (IQR)	31 (44)	27 (43)	36 (42)	0.76
Weekly dialysis time (hrs) mean (SD)	11 (2)	11(1)	12 (1)	0.01
RLS (%)	25	24	29	0.94
Pruritus (%)	30	27	35	0.86
Sleep satisfaction (%)	51	56	65	0.52
Insomnia (%)	71	82	48	0.05
Insomnia with day-time dysfunction (%)	44	47	19	0.11

* HD =hemodialysis; HDF= hemodiafiltration, h-e HDF= high-efficiency hemodiafiltration

METHODE

Cross-sectional study performed during November 2006 in 3 dialysis units in Western Switzerland assessing the presence of RLS, insomnia, risk for obstructive sleep apnea syndrome (OSAS) and pruritus with the help of validated questionnaires (RLSQ, Athens insomnia scale, Berlin questionnaire).

Hemodialysis modalities were classified as conventional hemodialysis, hemodiafiltration and high-efficient hemodiafiltration (with > 15 L of replacement fluid per treatment).

RESULTS

101 patients answered the questionnaire, of whom 63 were treated with conventional hemodialysis, 17 with on-line hemodiafiltration, and 21 with high-efficiency hemodiafiltration. The three groups of patients did not differ in term of age, gender, co-morbidity score, body mass index, dialysis vintage and weekly dialysis time. Prevalence of RLS, insomnia, increased risk for OSAS and pruritus were 25, 71, 14 and 30% in the hemodialysis group, 24, 82, 24 and 27% in the hemodiafiltration group and 29, 48, 5 and 35% in the high-efficiency hemodiafiltration group respectively.

CONCLUSIONS

Though this small population of hemodialysis patients, these data do not reveal advantage of hemodiafiltration over hemodialysis regarding the prevalence of RLS and pruritus. There is a trend towards less sleep disturbances in patients treated with high-efficiency HDF. These preliminary results need to be confirmed in a controlled interventional study