URAEMIC PRURITUS IS RELATED WITH DIALYSIS ADEQUACY IN HAEMODIALYSIS PATIENTS

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Introduction

Uraemic pruritus is one of the most common symptoms among patients with end-stage renal disease and haemodialysis (HD). Pruritus can be persistent and distressing, may have a significant negative impact on the quality of life and is accompanied by potential psychological, functional and social disorders, as well as increased morbidity (Fig 1). The pathogenic mechanism of uraemic pruritus has not yet been clarified.

Objectives

In this study, we sought to determine the prevalence of pruritus and the relation between pruritus and various demographic, clinical, and laboratory features among the HD patients in our centre.

Methods

All prevalent HD patients in our centre (age ≥18 years) in March 2016 were included, after they gave written informed consent to participate.

Patients were asked if they had experienced persistent itching of the skin (i.e., on a daily basis) during the past 4 weeks and were required to provide a simple "yes" or "no" answer. Demographic (age, gender) and medical history (dialysis vintage, presence or absence of diabetes mellitus and chronic viral hepatitis C) data were collected from the patients' medical files. Laboratory data (serum levels of haemoglobin [Hb], C-reactive protein [hs-CRP], calcium, phosphate, and intact parathyroid hormone [iPTH], and dialysis adequacy [equilibrated Kt/V, eKt/V]) were collected from the electronic patient database. Lab analyses were carried out using blood samples taken just before the mid-week dialysis session at the beginning of March 2016. All of these variables were included in the analysis.

Scratch marks with excoriations	Hyperkeratotic partly excoriated nodules	Deep scars and prurigo nodules

Fig. 1 Types of lessions in uraemic pruritus

Variable	Mean ± SD
Age (years)	59.2 ± 13.4
Dialysis vintage (months)	74.6 ± 41.2
Diabetes (%)	16.1%
Hepatitis C (%)	11.7%
Phosphate (mg/dl)	4.94 ± 3.17
Calcium (mg/dl)	8.74 ± 2.68
iPTH (pg/ml)	763.5 ± 367.48
Hb (g/dl)	11.53 ± 3.35
hs-CRP (mg/l)	14.49 ± 9.53
eKt/V	1.47 ± 0.33

Fig. 2 Descriptive results

Results

A number of 249 patients (123 males, mean age 59.2 ± 13.4 years) were included in the study. Descriptive results of the analysed variables are presented in the table above (Fig. 2). 54 patients (21.7%) reported pruritus. Among all studied variables, only eKt/V ($p = 0.012$) and the presence of chronic hepatitis C ($p = 0.001$) were significantly correlated with the presence of pruritus. Mean eKt/V was 1.49 among patients without pruritus versus 1.39 in those with pruritus. A separate subgroup analysis showed however that eKt/V was associated with pruritus only in males and in patients without hepatitis.

Conclusion

In our study, the prevalence of pruritus was 21.7%. This is lower than the average prevalence reported in the literature, which is around 40%. However, the prevalence of pruritus was shown to vary widely from one country to another and, within a given country, from centre to centre. For example, the DOPPS study reported a prevalence ranging from 36% in France to 50% in the UK, whereas the variation between facilities ranged from 5% to 75% [1].

In conclusion, uraemic pruritus is common among HD patients and is related with dialysis adequacy. An eKt/V ≥1.4 may be required to monitor and control pruritus in these patients.

References

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