

**PP32****Chronic stress and risk of recurrence in first calcium oxalate stone formers: a prospective study with five years of follow-up**

M. Arzoz-Fàbregas¹, J. Roca-Antonio², S. Edo-Izquierdo³, G. Garcia de Manuel¹, O. Calaf Perisé¹, J. Fernandez Castro³, L. Ibarz-Servio¹

¹ Department of Urology, Hospital Germans Trias I Pujol, Badalona, Spain

² Department of Epidemiology, Hospital Germans Trias I Pujol, Badalona, Spain

³ Department of Psychology, Universitat Autònoma De Barcelona (UAB), Barcelona, Spain

Introduction and Objectives: Increased number of stressful life events and a greater intensity of perceived stressful life events have been observed in recurrent stone formers (RS) in comparison with first stone formers (FS). These differences seem to indicate a potential relation between chronic stress and risk of recurrence. To date, however, no prospective study has evaluated chronic stress as a risk factor for recurrence. Here we report our prospective study of FS patients at five years of follow-up.

Material and Methods: From YEAR to YEAR, a total of 31 patients were enrolled in this prospective study. All patients were FS – calcium oxalate stone formers with a recent (<3 months) first episode of lithiasis. All dimensions of chronic stress were evaluated in all patients at the beginning of the study using validated self-reporting questionnaires measuring stressful life events, perceived stress, anxiety, depression, burnout, and satisfaction with life. In addition, an ad hoc self-reporting questionnaire was designed to evaluate stress related to the stone episode. Blood and eight-hour urine samples were collected from all patients. Epidemiological data, socioeconomic characteristics, and information on dietary habits were recorded. After five years of follow-up, we have compared data between FS who later had recurrent episodes of stone formation (FSR) and FS who did not have recurrent episodes (FSNR).

Results: During the five-year follow-up, recurrent episodes occurred in 9 (29%) patients, while 22 were FSNR (71%). 44.4% of FSR and 36.6% of FSNR patients were males, and median age was 32 (20-47) and 49.5 (22-74) years, respectively. There were no significant differences between FSR and FSNR patients in gender, epidemiological data, dietary habits, socioeconomic level or incidence of metabolic syndrome. In contrast, the number of stressful life events ($p=0.01$) and the intensity of perceived stressful life events ($p=0.02$) were significantly higher in FSR than in FSNR patients. However, there were no differences between the two groups in perceived stress, stress related to stone episodes, anxiety, depression, burnout, or satisfaction with life.

Conclusions: A higher number of stressful life events and a greater intensity of perceived stressful life events were observed in FSR than in FSNR patients, as evaluated at the time of their first stone episode. Despite the limited number of patients included in this study, these findings suggests that stressful life events and the intensity of perceived events are both risk factors for recurrence of stone formation in a FS patient. Future studies are warranted to confirm these results and help determine appropriate preventive treatment.