Background: Lower urinary tract symptoms (LUTS) are an underdiagnosed but frequent manifestation in systemic sclerosis (SSc) [1]. LUTS pathogenesis in SSc is undetermined, mainly involving dysautonomia, fibrosis and a possible antibody-mediated damage [2]. Divergently from general population, female sex and advanced age are not reported to significantly impact LUTS in SSc [2].

Objectives: To evaluate the potential influence of gender and hormone-related factors in LUTS prevalence and severity among SSc patients (Pts).

Methods: A population of 42 SSc Pts and 50 age- and sex-matched healthy subjects (HSs) was evaluated. SSc diagnosis was based on 2013 ACR/EULAR criteria. Demographic data, medications interfering with pelvic floor dynamics and general comorbidities commonly associated with LUTS – diabetes mellitus, chronic heart failure, chronic obstructive pulmonary disease, peripheral neuropathy, pelvic organ prolapse, fecal incontinence – were recorded. Validated self-reported questionnaires derived from the International Conference on Incontinence were used to assess prevalence and severity of LUTS, namely of urinary incontinence (UI) and overactive bladder (OAB) [3]. Data were analysed using non-parametric tests. A p value <0.05 and a confidence interval (CI) of 95% were considered statistically significant.

Results: There were no significant differences in main demographic data between SSc Pts and HSs. Specifically, median age was 61 years (IQR 21-85) vs 57 years (IQR 28-93) and female prevalence, 83% vs 84% in SSc Pts vs HSs, respectively. Amongst the female population, 83% of SSc Pts vs 84% of HSs was in post-menopausal state, with a median of 1 (IQR 0-3) vs 1 (IQR 0-4) pregnancy by natural route, respectively. No woman of the study had received hormone replacement therapy or local hormonal therapies prior to the study. Similarly, there were not any significant differences in analysed comorbidities, while ongoing treatment was significantly different between the two populations, SSc patients more frequently receiving calcium channel blockers and glucocorticoids than healthy subjects (p < 0.005), but any significant difference was observed in US distribution depending on parity and menopausal state, nor on other analysed variables. Interestingly, female dominance has not resulted as a significant predictive factor for LUTS prevalence or severity in SSc Pts. In fact, in the regression analysis, SSc disease was the only significant predictor for LUTS (OR 3.45, 95% CI 1.41-7.95; p < 0.01), independently of other analysed variables, particularly of gender and hormone-related factors.

Conclusion: This study confirms the absence of pathogenic female-gender participation in LUTS prevalence among SSc Pts. However, consistently with findings on general population, a significant increased prevalence of urinary symptoms, particularly of stress UI, in female Pts has emerged [4]. It is therefore conceivable that hormonal factors may act as a catalytic circumstance rather than pathogenic players in LUTS progression during SSc disease.

References: