

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* < 0.001). In SSc Pts, statistically significant correlation was observed between stress UI and sex, with an increased female-to-male ratio (*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 SSc 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:

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EFFICACY OF A SELF-TREATMENT PROTOCOL FOR FACE AND TEMPOROMANDIBULAR JOINTS REHABILITATION IN SYSTEMIC SCLEROSIS (SSC)

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Background: In SSc, skin involvement of the face is frequent and extremely disabling, resulting in limited mouth opening, an altered dentition, difficulty in teeth care, as well as having a strong impact on the emotional and psychological well-being, thus impairing quality of life.

Objectives: To evaluate the efficacy of a self-treatment protocol (created by AMURR A Multidisciplinary Association of Rheumatological Rehabilitation) for face and temporomandibular joints (TMJs) rehabilitation with two devices used in the dental field.

Methods: 40 SSc patients (37 female and 3 male) with a mouth opening ≤ 40mm, were recruited and randomized in two groups of treatment: Group 1 (20 patients: mean age 50,650 yrs ± 13,937 SD, mean disease duration 10,45 yrs ± 7,877 SD, opening mouth 32,250 mm ± 5,590 SD) treated with a home self-treatment protocol consisting of 23 exercises carried out at home in front of a mirror, 22/23 exercises were performed once a day, one of these using a device to obtain uniform stretching of the buccal rhyme, another one using three times a day to reduce tension of muscles of the TMJs, facilitating the mouth opening; group 2 (20 patients: mean age 58,05 yrs ± 18,103 SD, mean disease duration 17,4 yrs ± 15,017 SD, opening mouth 34,950 mm ± 5,753) without physical rehabilitation, only drugs as treatments of SSc and its complications. All patients underwent a baseline (T0) and 45 days (T1) clinimetric assessment by self-assessment of quality of life with SF-36 (Short-Form 36 Health Survey), of the degree of disability of the mouth with MHISS (of the Mouth Handicap in Systemic Sclerosis scale), Muscle pain evaluated by numerical rating scale (NRS) of the temporomandibular joint with TMD (Temporo mandibular Disorders), evaluation of mouth opening and ROM of the cervical spine. Statistical analysis was performed using the t-test or the Mann-Whitney test for assessing changes in all measurement scales between treatment groups.

Results: The protocol of home physiotherapy exercises resulted in a statistically significant improvement in the treated group compared to group 2 both for mouth opening (T0: 32,250 ± 5,590, T1: 35,650 ± 6,046) vs (T0: 34,950 ± 5,753 T1: 34,300 ± 6,001) (*p* < 0.001), cervical flexion (T0: 2,950 ± 1,939 T1: 1,700 ± 1,525) vs (T0: 4,450 ± 2,282 T1: 4,075 ± 2,238) (*p* < 0.01), cervical extension (T0: 17,025 ± 1,895 T1: 17,625 ± 1,605) vs (T0: 17,050 ± 2,089 T1: 16,525 ± 3,110) (*p* < 0.05), cervical right lateral flexion (T0: 14,075 ± 2,386 T1: 13,400 ± 2,431) vs (T0: 14,200 ± 1,765 T1: 14,425 ± 1,742) (*p* < 0.01), cervical right rotation (T0: 14,200 ± 3,416 T1: 13,750 ± 3,206) vs (T0: 14,900 ± 1,683 T1: 15,550 ± 2,188) (*p* < 0.01), cervical left rotation (T0: 14,725 ± 3,640 T1: 14,450 ± 3,710) vs (T0: 15,900 ± 2,614 T1: 16,450 ± 2,964) (*p* < 0.05), mouth disability at MHISS (T0: 19,100 ± 10,356 T1: 16,000 ± 9,989) vs (T0: 20,950 ± 9,950, T1: 21,100 ± 10,775) (*p* < 0.01).

Conclusion: The use of the home exercises protocol associated with the two devices has shown a significant improvement of the disability linked to skin involvement of the face. This highlights the fundamental role that home rehabilitation self therapy has in practice. These data will need to be confirmed in a larger cohort of patients

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EPIDEMIOLOGIC VARIATION ON SCLERODERMA RENAL CRISIS AND CLINICAL FEATURES VARIATION ON SYSTEMIC SCLEROSIS PATIENTS OVER TIME: DATA FROM RESCLE REGISTRY.

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