**Abstract**

**Title:** Sexual Dysfunction and Pelvic Floor Dysfunction in Patients with Systemic Rheumatic Diseases

**Objectives:** To assess sexual functions, quality of life and pelvic floor function in female patients with Systemic Sclerosis (SSc) and Idiopathic Inflammatory Myopathies (IIM) compared to age-/sex-matched healthy controls (HC).

**Methods:** In total, 41 women with SSc (mean age: 50.9, disease duration: 5.8 years), who fulfilled the ACR/EULAR 2013 classification criteria for SSc, 41 healthy controls (mean age: 50.9) without rheumatic diseases, 22 women with IIM [mean age: 55.1, disease duration: 7.9 years, dermatomyositis (DM, 8)/ polymyositis (PM, 10)/ necrotizing myopathy (IMNM, 3)/ inclusion body myositis (IBM, 1)], who fulfilled the Bohan/Peter 1975 diagnostic criteria for DM/PM, and 22 healthy controls (mean age: 55.1 years) filled in 12 well-established and validated questionnaires assessing sexual function/quality of life, pelvic floor function, fatigue, physical activity and depression.

**Results:** Compared to HC, patients with SSc and IIM had significantly higher prevalence and greater severity of sexual dysfunction (FSFI, BISF-W: in all subscales as well as total scores), dysfunction of pelvic floor (PISQ-12), and worse sexual quality of life (SQoL-F). Worse scores in SSc patients were associated with higher disease activity [ESSG activity index: SQol-F (r=-0.364, p=0.0443)], greater fatigue [all three questionnaires FSS/FIS/MAF correlated negatively with FSFI, BISF-W], more severe depression [BDI-II: FSFI (r=-0.553, p=0.0002), BISF-W (r=-0.514, p=0.0007)], deteriorated quality of life [SHAQ: FSFI (r=-0.536, p=0.0003), BISF-W (r=-0.563, p=0.0001), PFIQ7 (r=0.380, p=0.0142)], and worse ability to perform physical activities [HAP: FSFI (r=0.407, p=0.0082), BISF-W (r=0.409, p=0.0078)]. Worse scores in IIM patients were associated with elevated muscle enzyme levels [lactate dehydrogenase: FSFI (r=-0.524, p=0.0123), BISFW (r=-0.528, p=0.0115)], greater fatigue [FIS: FSFI (r=-0.434, p=0.0438), BISF-W (r=-0.488, p=0.0211)], more severe depression [BDI-II: PISQ-12 (r=0.474, p=0.0258)], deteriorated quality of life [HAQ: PISQ-12 (r=0.476, p=0.0252)], and worse ability to perform physical activities [HAP: FSFI (r=0.437, p=0.0417), BISF-W (r=0.451, p=0.0351), PISQ-12 (r=-0.494, p=0.0195)].

**Keywords:** Female Sexual Dysfunction, Systemic Sclerosis, Idiopathic Inflammatory Myopathies, Pelvic Floor Dysfunction