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Background: Idiopathic inflammatory myopathies (IIM) are rare diseases characterized by chronic muscle inflammation and multiple organ involvement. These serious clinical manifestations can be associated with significant impairment of quality of life, including sexual life.

Objectives: This study aimed to compare sexual function in patients with IIM to age-/sex-matched healthy controls (HC) and determine the potential impact of clinical features on sexual function.

Methods: In total, 62 women with IIM [mean age: 53.1, disease duration: 5.2 years, dermatomyositis (DM, 29)/ polymyositis (PM, 27)/ necrotizing myopathy (IMNM, 5)/ inclusion body myositis (IBM, 1)], who fulfilled the Bohan/Peter 1975 criteria for DM/PM, or ENMC criteria for IMNM or IBM, and 62 healthy controls (HC) (mean age: 53.1) without rheumatic diseases filled in 11 well-established and validated questionnaires assessing sexual function (FSFI, SFQ28, BISF-W, SQoL-F), pelvic floor function (PFIQ-7, PISQ-12), fatigue (FIS, Fatigue Impact Scale), physical activity (HAP, Human Activity Profile), disability (HAQ, Health Assessment Questionnaire), depression (BDI-II, Beck's Depression Inventory-II), and quality of life (SF-36, Medical Outcomes Study Short Form 36 – PCS, Physical Component Summary; MCS, Mental Component Summary). A routine laboratory testing was performed. Data are presented as median (IQR).

Results: Patients with IIM reported significantly greater prevalence and severity of sexual dysfunction (FSFI, BISF-W, SFQ28, SQoL-F) and pelvic floor dysfunction (PISQ-12, PFIQ-7) compared to HC (Table 1). The prevalence of sexual dysfunction in patients with IIM according to the FSFI cut-off score was 59%. Worse scores in IIM patients were associated with greater muscle weakness of m. gluteus maximus [MMT: FSFI ($r=0.289$, $p=0.035$), PFIQ-7 ($r=-0.407$, $p=0.003$)], m. gluteus medius [MMT: PFIQ-7 ($r=-0.381$, $p=0.005$)], more pronounced fatigue [FIS: SQoL-F ($r=-0.412$, $p=0.003$)], severer depression [BDI-II: SQoL-F ($r=-0.459$, $p=0.0007$)], worse functional disability [HAQ: FSFI ($r=-0.436$, $p=0.005$)], reduced physical activity [HAP: FSFI ($r=0.403$, $p=0.001$), SQoL-F ($r=0.368$, $p=0.007$)], and decreased quality of life [SF-36 PCS: FSFI-total ($r=0.381$, $p=0.002$), SF-36 MCS: SQoL-F ($r=0.407$, $p=0.002$)]. We did not observe any associations with disease duration, the current prednisone dose, or serum levels of muscle enzymes.

Conclusion: Women with IIM reported significantly impaired sexual function and pelvic floor function compared to age-/sex-matched healthy controls. Worse scores in IIM were associated with disease-related features.

Table 1. Sexual function and pelvic floor function in women with IIM and healthy controls

Questionnaire: score range (meaning)	IIM (n=62)	HC (n=62)	p-value
FSFI: Female Sexual Function Index: 2 (worst) - 36 (best)	18.2 (3.2-28.5)	28.4 (14.4-32.1)	p=0.006
BISF-W: Brief Index of Sexual Function for Women: -16 (worst) - 75 (best)	18.6 (2.7-32.3)	34.0 (8.0-44.7)	p=0.004
SQoL-F: Sexual Quality of Life Questionnaire – Female: 0 (worst) - 100 (best)	60.0 (41.4-83.6)	86.7 (70.8-95.6)	p<0.0001
PISQ-12: Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire short form: 0 (best) - 48 (worst)	14.5 (9.0-18.0)	8.0 (5.0-12.0)	p<0.0001
PFIQ7: Pelvic Floor Impact Questionnaire – short form 7: 0 (best) - 300 (worst)	4.8 (0.0-23.8)	0.0 (0.0-4.8)	p=0.052
SFQ-28: Sexual Functioning Questionnaire-28 desire: 5 (worst) - 31 (best)	18.0 (13.3-20.0)	19.0 (17.0-22.0)	p=0.042
SFQ-28 arousal sensation: 4 (worst) - 20 (best)	9.5 (7.0-11.0)	12.0 (9.0-14.3)	p=0.082
SFQ-28 arousal lubrication: 2 (worst) - 10 (best)	6.0 (4.0-8.0)	7.0 (5.0-9.0)	p=0.112
SFQ-28 arousal cognitive: 2 (worst) - 10 (best)	6.0 (4.3-7.0)	6.0 (5.0-7.3)	p=0.235
SFQ-28 orgasm: 1 (worst) - 15 (best)	11.0 (8.0-13.0)	12.0 (9.8-13.0)	p=0.279
SFQ-28 pain: 2 (worst) - 15 (best)	12.0 (10.0-15.0)	15.0 (13.0-15.0)	p=0.004
SFQ-28 enjoyment: 6 (worst) - 30 (best)	19.0 (14.3-24.3)	23.0 (19.0-25.0)	p=0.027
SFQ-28 partner: 2 (worst) - 10 (best)	9.0 (8.0-10.0)	10.0 (9.0-10.0)	p=0.012

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NAILFOLD CAPILLARY DILATIONS IN RAYNAUD'S PHENOMENON: QUANTIFYING A PREDICTIVE THRESHOLD FOR THE 'SCLERODERMA PATTERN'

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Background: Non-specific abnormalities could be detected by nailfold videocapillaroscopy (NVC) in subject with primary Raynaud's Phenomenon (RP) several years before the clinical onset of connective tissue diseases (CTD)s [1]. Previous findings from our group proved that ≤ 30 μ m capillary dilations in RP patients have a negative predictive value for developing the 'scleroderma pattern' during follow-up [2].

Objectives: To investigate the role of NVC >30 μ m capillary dilations as positive predictive factors of the 'scleroderma pattern' in RP patients later developing systemic sclerosis (SSc)-related RP.

Methods: A 10-year retrospective NVC-based investigation evaluated the dataset of sequential NVCs of 18 RP patients later developing SSc (cases) and 19 sex- and age-matched RP patients later developing other CTDs (controls). Both cases and controls had ≥ 1 NVC performed before the 'scleroderma pattern'/CTD diagnosis (basal NVC) showing >30 μ m dilated capillaries. Each NVC was qualitatively and semi-quantitatively assessed, recording number of total capillaries, number and average/site-specific diameters (arterial, apical, venous) of >30 μ m dilated capillaries [3]. Statistical analysis was performed to stratify the risk of developing the 'scleroderma pattern'.

Results: Significant differences of capillary diameters were observed between cases and controls both at basal NVC and during follow-up ($p<0.001$). The proportion of >30 μ m dilated capillaries in basal NVC was the strongest predictor of 'scleroderma pattern' in a median 3-year time, with a 27% cut-off (PPV 0.79, 95%CI 0.54,0.94; $p<0.001$). Additional "Higher risk" NVC hallmarks for 'scleroderma pattern' development were apical diameter >40 μ m ($p<0.001$), venous diameter >25 μ m ($p<0.05$) and average diameter ≥ 35 μ m ($p<0.005$). Conversely, CTDs patients showed a stable NVC 'non-scleroderma pattern' over a median 10-year time.

Conclusion: This is the first study to show that NVC-detected homogeneous and progressive capillary loop dilations in RP patients significantly contribute to predict the 'scleroderma pattern' evolution within a median 3-year time, possibly providing a "very early" window of opportunity in SSc pre-clinical stages.

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