Impact and adherence to the Mediterranean diet in systemic sclerosis Italian patients: Correlation with gastrointestinal symptoms, mood disturbances and quality of life

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Background: Gastrointestinal involvement (GI) is a common feature of systemic sclerosis (SSc) and can be highly disabling, representing a major cause of morbidity and reduced quality of life (QoL). The impact of dietary habits on GI symptoms, mood and QoL has not been extensively evaluated.

Objectives: To evaluate the adherence to the Mediterranean Diet (MD) in an Italian multicenter cohort of SSc patients, and its impact on GI symptoms and other disease features, depression, anxiety and overall QoL.

Methods: Consecutive SSc (ACR/EULAR 2013) patients from 4 Italian cohorts were enrolled. Dietary habits and adherence to the MD were assessed using the 14-item MEDAS and QueMD questionnaires. Presence and severity of depressive symptoms and QoL were evaluated with the Hospital Anxiety and Depression Scale (HADS) and the SS-SSC-HAQ (S-SSC-HAQ). GI symptoms were assessed with the Reflex Disease Questionnaire (RDQ) and the UCLACTGI Tract 2.0 questionnaire (USG). Associations with patients' lifestyle, disease characteristics, and nutritional status were explored.

Results: 265 patients (94.7% females; age 55.8±13.6 years; disease duration 9.1±7.0 years; diffuse SSc 31.8%; SSc + PSS 25.8%; ulcers 23.4%; ILD 29.4%; BMI 23.7±4.4 Kg/m²; obese 11.3%; overweight 23.4%; underweight 4.9%) were enrolled. Overall MD adherence was moderate (75±1.9) according to MEDAS and it correlated with QueMD score R 0.432 (p=0.001). MD adherence was optimal in 39 patients (14.7%), more frequently from Central-Southern Italy (p=0.036); 189 patients (71.3%) had a good and 37 (14.0%) a poor MD adherence.

GI symptoms were moderate/severe according to USG in 37 (14.0%) patients (USG: 0.41±0.40), and heartburn was the most common GI symptom (35.2%). The prevalence of significant anxiety and depression was 24.1% and 17.0%, respectively.

An inverse correlation was found between MD adherence and mood disturbances at HADS (MEDAS: R=-0.181, p=0.04), work impairment (QueMD: R=-0.247, p=0.005) and reduced QoL, both for GI (constipation at USG: R=-0.133, p=0.032) and general S-SSC-HAQ items (bowel: R=-0.181, p=0.04; severity R=-0.202, p=0.01; Raynaud: R=-0.217, p=0.001; ulcers: R=-0.207, p=0.01). MD adherence directly correlated with lung function (MEDAS: R=0.181, p=0.023 for FVC and R=0.170, p=0.03 for DLCO). Patients with MD optimal adherence had lower HADS depression (p=0.04) and S-SSC-HAQ scores (p=0.04; Raynaud: p=0.005; ulcers: p=0.02) and lower work impairment and lost work time (p=0.03). No significant correlation emerged between MD adherence and specific symptoms. Depression and anxiety directly correlated with the severity of reported upper GI symptoms according to both scales (RDQ-GERD: R=0.261, p=0.001; USG: R=0.263, p=0.001) and general S-SSC-HAQ items (HAQ: R=0.136, p=0.032; severity R=0.233, p=0.001; bowel: R=0.135, p=0.04; breath: R=0.133, p=0.03; ulcers: R=0.132, p=0.037). Results were confirmed after exclusion of psychiatric (11.7%) and fibromyalgic (15.5%) patients.

Conclusion: Unsatisfactory MD adherence is associated with a low mood, impaired QoL, work impairment, GI and vascular symptoms in Italian SSc patients. The promotion of a healthy lifestyle could positively impact on QoL and disease status of SSc patients.

References:

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