measures magnitude of response rather than probability of response and includes the possibility of measuring worsening of disease. Application of the simple formula to the results of RCTs adopting CRIS as explorative efficacy objective will determine the validity of mCRS in offering quantitative assessment of response in SSC.

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SAT0263

MALIGNANT CONDITIONS IN SYSTEMIC SCLEROSIS PATIENTS, SINGLE CENTER EXPERIENCE

Alexandra Balbir-Gurman¹, Menahem Nahir², Vika Shataylo³, Doron Markovits³, Yolanda Braun-Moscovici¹. ¹Rambam Health Care Campus, Rappaport Faculty of Medicine, Technion, Rheumatology Institute, Haifa, Israel; ²ambam Health Care Campus, Rappaport Faculty of Medicine, Technion, Rheumatology Institute, Haifa, Israel; ³Rambam Health Care Campus, Rheumatology Institute, Haifa, Israel

Background: Internal organ complications (interstitial lung disease [ILD], pulmonary hypertension [PAH], renal crisis [SRC], gastrointestinal involvement [GIT], etc.) have significant influence on scleroderma (SSc) patients' morbidity and mortality; malignancy could contribute to SSc outcome.

Objectives: We aim to assess the incidence of malignancy, clinical and laboratory factors associated with this complication.

Methods: We identified 43 patients with biopsy and/or imaging confirmed malignant conditions (SSc-C); additionally, case-control study was performed with identifying SSc patients without cancer (All-NC, N=86) divided into two subgroups: matching age (Age-NC, N=43) and matching disease duration (DD-NC, N=43).

Results: Since 2004, 424 SSc patients were assessed at our center (340 EUSTAR registry participants); 43 (10.1%) SSc-C patients (7 males [16.3%]; age [years, standard deviation, SD] 68.1[12.7]; age at SSc onset 52.9[14.9]; age at 1st cancer diagnosis 54.2[12.7]; smoking 12 [27.9] had various types of tumors: breast 9; lung 8; neck & head 8 (brain-3, thyroid-3, parotis-1, laryngs-1); genito-urinary 8 (prostate-1, ovary-3, utery-4; GIT 6 (stomach 2, pancreas 2, colon 2); hematologic 3 (lymphoma 2, myeloma 1); skin 3; pheochromocytoma 1, carcinoid 2; sarcoma 1. Thirteen patients (30.2%) developed cancer three years before or after SSc onset; 7 patients had cancer long before SSc; 6 patients had two cancers. Comparison between SSc-C patients and subgroups Age-NC, DD-NC and All-NC patient's subgroup did not reveal any difference in term of disease subset, presence of antibodies to topoisomerase, centromere, RNA polymerase, and clinical features (digital ulcers, ILD, GIT & heart involvement, PAH, myositis, polyautoimmunity); there were no cases of SRC in SSc-C patients compared to 8 (9.3%) patients in All-NC patients. Twenty-six (60.5%) SSc-C patients died compared to 16 (37.2) in Age-NC (P<0.08), DD-NC (P<0.001), All-NC (P<0.001). SSc related death was reported in 22.1% of All-NC patients and 16.3% of SSc-C (P=NS); 19 patients dead from cancer (73.1%). There were no differences between cancer and non-cancer patients in term of treatment with methotrexate, mycophenolate, azathioprine, cyclophosphamide, calcium blockers and iloprost; 24.3% SSc-C patients were treated with bosentan compared to 44.5% (P,0.015).

Conclusion: Malignancy is an often and variable scleroderma complication; it could preclude SSc or appeared during SSc course. Patients with malignancy had higher mortality rate and mostly dead from cancer. There no cases of tumor in those patients who developed SRC. Patients treated with bosentan has less incidence of tumor. Prompt screening for cancer should be consider as a reasonable approach in caring SSc patients; early diagnosis and treatment of tumor may improve SSc patients' survival.

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SAT0264

GAZE PATTERN ANALYSIS IN THE ASSESSMENT OF DIGITAL ULCERS IN PATIENTS WITH SYSTEMIC SCLEROSIS

Thomas Moser¹, Quentin Lohmeyer², Mirko Meboldt², Oliver Distler¹, Mike O. Becker¹. ¹University Hospital Zürich, Rheumatology, Zürich, Switzerland; ²ETH Zürich, Mechanical and Process Engineering, Zürich, Switzerland

Background: The assessment of chronic wounds such as digital ulcers (DUs) in systemic sclerosis relies heavily on visual aspects. However, inter-rater variability in the assessment and definition of digital ulcers is low and there are no evidence-based data concerning the visual assessment of digital ulcers^a.

Objectives: We analysed gaze pattern data in order to evaluate differences in the visual assessment of digital ulcers in systemic sclerosis patients.

Methods: We analysed gaze pattern data from 36 subjects: 9 expert medical professionals (EMP), 8 non-expert medical professionals (NEMP), 9 medical graduates (MG) and 10 lay persons (novices). Assessment was done using a mobile eye-tracking device that tracks eye movements of subjects. Twenty pictures from digital ulcers of SSc patients were presented to each subject, 30 seconds each and characteristics of gaze pattern data were analysed. The analysis comprised the scan path, the dwell times (for areas of interest, AOI), fixation counts and the entry time for each picture and subject. Areas of interest were defined as the wound ground, wound margin, wound surroundings and distracting and non-relevant parts of the pictures. The visual assessment of the digital ulcers was accompanied by questions for each subject about their assessment of the DUs, the expected healing of the ulcer, the medical treatment of the patient.

Results: Most significant differences were found between novices and medically educated groups (expert medical professionals, non-expert medical professionals, medical graduates - EMP, NEMP, MG). Dwell times in the wound area for novices differed statistically significant from all medically educated groups (1.76s-3.1s less). Above all, novices had lower dwell times in wound margin and wound surrounding and spent more time in areas with other distracting features of the picture and white space (up to 1.92s longer). Correspondingly, they had less fixation points and longer overall scan paths in wound areas. Similar gaze pattern data were observed for medically educated groups, however NEMP had a statistically significantly lower dwell time in the wound area than EMP. Questionnaire responses were compared to an expert opinion (gold standard) and EMP had significantly more correct answers on prognosis and treatment than MG for wound assessment, but not better than NEMP. However, treatment and prognosis were best in the EMP group with statistical difference to the NEMP and MG group.

Conclusion: For the first time, we provide evidence-based data on the visual assessment of digital ulcers in SSc. These data will be useful for the development of a structured educational programme for young physicians, rheumatology trainees and medical graduates. A key finding is that the visual assessment of digital ulcers should increasingly emphasize the importance of pathologic changes in the wound margin and surrounding area of the wound. Hence a structured approach should focus on all areas of the wound while discarding distracting visual information. An adequate terminology should be used alongside.

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