QUANTITATIVE INDEXES TO ASSESS THE INTERSTITIAL LUNG DISEASE, AND ITS EXTENSION, IN SJÖGREN’S SYNDROME

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Results: 102 consecutive SS patients were enrolled. ILD prevalence was 36% (36/102). There was a difference in QCT indexes were clustered in cohorts according to ILD extent. Differences in QCT values were all significant (p<0.001). The average SGUS score was 0.95, p< 0.001; cut-off 2.72 - sensitivity 0.81 (95CI 0.65-0.9), specificity 0.82 (95CI 0.70-0.89).

Conclusion: QCT indexes are a serious alternative to visual scorings in ILD related to autoimmune diseases. This innovative tool will open up a potential research area in SS as it appears able to select ILD affected patients with an extensive lung involvement and likewise a worse prognosis. We are confident that in the next future, QCT will have a pivotal role in the diagnosis, monitoring and treatment pathway of ILD associated to SS.

REFERENCES:

Disclosure of Interests: None declared


THE ROLE OF INFRARED THERMOGRAPHY IN THE ASSESSMENT OF PERIPHERAL VASCULOPATHY AND IN THE THERAPEUTIC MANAGEMENT OF SYSTEMIC SCLEROSIS PATIENTS TREATED WITH SYNTHETIC PROSTANOIDS

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Background: Skin lesions represent the leading feature of systemic sclerosis (SSc), with Raynaud’s phenomenon (RP) the most frequent and early clinical manifestation of the disease. Digital vasculopathy severely affects SSc patients, lowering their quality of life and negatively impacting on their daily functions. Digital ulcers is associated with poor cardiovascular prognosis and decreased survival rate [1]. Nevertheless, standardized treatment strategies and non-invasive tools for the management of RP and SSc skin manifestations are badly needed.

Objectives: The aim of this study was a) to evaluate the efficacy of infrared thermography in the assessment of peripheral vasculopathy in a cohort of SSc patients treated with cyclical intravenous infusions with synthetic prostanooids b) to identify those patients who might benefit from an intensified insfusional treatment protocol with prostanooids.

Methods: Twenty-six SSc patients [2], attending our Department for their routinely 28-days apart intravenous therapy with prostanooids (Iloprost) based on the presence of severe secondary RP and/or digital ulcers, were enrolled in this study. Infrared thermography was made at baseline (T0), and at days 14 and 28 after the first prostanooids infusion (named T1 and T2, respectively). Statistical analyses have been performed and a p-value <0.05 was considered statistically significant.

References:

Disclosure of Interests: None declared


SALIVARY GLAND ULTRASONOGRAPHY FOR SJÖGREN SYNDROME AND SIICCA SYMPTOMS WITH EVALUATION THE DIFFERENT IMAGE PARAMETERS AND BIOPSY RESULT

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Background: Sjögren’s syndrome involves multiple organs, especially the lacrimal and salivary glands. Salivary gland ultrasonography (SGUS) is quick and easily accessible, which provides visibility of salivary glands. Currently, there were several scoring systems for SGUS. Acuity for different image parameters remained unclear, and their parameters having heterogeneity of glands, clearance of posterior border, size of glands, fibrosis bands and size of vacuoles in the glands. Each gland would be scored through these parameters which may rank from 0 to 3 or 0 to 4. The weight of different parameters have not been clarified.

Objectives: To evaluate the effectiveness of different image parameters of SGUS in evaluating Sjögren’s syndrome.

Methods: Total SGUS with 56 patients were retrospectively evaluated, who also underwent minor salivary gland biopsy. SGUS was conducted by a 10MHz-13MHz linear probe at both parotid and submandibular glands. Each gland was scored from 0 to 4 according to the scoring scale proposed previously. The total maximum score was 16. Heterogeneous structure, fibrosis band and size of vacuoles were evaluated for each gland. Minor salivary gland biopsy was evaluated by Chisholm-Mason grade, ranging from 1-4.

Results: The distribution of minor salivary gland biopsy was grade 1 (28.6%), grade 2 (14.3%), grade 3 (19.6%), and grade 4 (37.5%). The average SGUS score was 6.00 for grade 1, 6.38 for grade 2, 7.00 for grade 3 and 10.00 for grade 4 (p=0.019). Evaluation different image parameters for each gland, heterogeneous structure and fibrosis bands revealed significant in linear regression of parotid gland score (heterogeneous structure p=0.043 for left side, p=0.025 for right side; fibrosis bands p<0.001 for both sides) but size of vacuoles did not reveal significant. Fibrosis bands and size of vacuoles revealed significant in the linear regression model of submandibular glands (both <0.001 in both sides). Final pathology grade correlated with fibrosis bands of left side parotid gland (p=0.006), fibrosis bands of both sides of submandibular glands (p=0.006 for left side, p=0.001 for right side), and size of vacuoles among submandibular glands (p=0.003 for left side, p=0.012 for right side). In regarding to the different image parameters, the biopsy result correlated well with total summation of SGUS (p=0.004).

Conclusion: Different image parameters had different significance for representing the gland conditions. For parotid glands, fibrosis bands and heterogeneous structure were main parameters. For submandibular glands, fibrosis bands and size of vacuoles accounted for the change of glands. SGUS correlated with final pathology result.

References:

Disclosure of Interests: None declared

SUITABILITY OF PET-CT IN REFRACTORY POLYMYPALGIA RHEUMATICA

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Background: Polymyalgia rheumatica (PMR) is characterized by pain in the shoulders and hips, elevation of acute phase reactants and a rapid response to treatment with corticosteroids. Currently, there is no specific test for its diagnosis, and it presents a wide differential diagnosis. Positron Emission Tomography – Computed tomography (PET-CT) is a non-invasive technique, capable of measuring metabolic activity by localizing and quantifying glucose consumption. The use of PET-CT in the study of neoplastic, infectious or inflammatory processes suggests that it may be a suitable technique for the study of the differential diagnosis of patients with PMR. It is unknown if there are differences in the result of the technique in patients with debut PMR vs. patients with cortico-resistant PMR.

Objectives: To describe the findings of PET-CT in patients with PMR. To analyze if there are significant differences between the results of patients with onset PMR and those of cortico-resistant PMR patients.

Methods: This is a cross-sectional prospective study performed in a cohort of patients with PMR. Out of all patients with PMR who do follow up treatment in our centre, the patients selected for this study included those who underwent a PET scan at the time of diagnosis and those who presented corticosteroid resistance (patients who did not respond to conventional therapy with corticosteroids or with a relapse with doses <7.5mg/day of prednisone or equivalent). Demographic, epidemiological data of the disease, treatment, as well as analytical parameters (CRP, ESR, Hematological and Biochemical) were collected from all the patients at the time the PET-CT was performed.

For the categorical variables, the chi-square test or Fisher’s exact test were used, as appropriate. In the case of quantitative variables, we used the comparison of the mean values, by means of a ‘t’ test. The level of statistical significance was established for those values of p <0.05.

Results: 103 patients with a PMR diagnosis who had undergone a PET-TC were included, out of the total number of patients that we visited in our service. 52 (50.4%) patients had an onset PMR and 51 (49.9%) had PMR refractory to treatment. The demographic, clinical and serological characteristics of the patients at the time of PET-CT are shown in Table 1.

The PET-CT showed a distribution of uptake compatible with the diagnosis of PMR in 73 (70.9%) patients, vasculitis of large vessels in 16 (15.6%) patients, vasculitis of small vessels in 9 (8.6%) patients, and other processes in 5 (4.8%) patients. 15 patients had no significant uptake on the PET-CT. The most common findings were uptake compatible with active inflammation in the shoulders and hips, elevation of acute phase reactants and a rapid response to treatment with corticosteroids. In the patients with onset PMR vs. patients with cortico-resistant PMR, there were no significant differences in terms of demographic, clinical and serological characteristics.

The thermographic assessment showed a substantial stability of the temperature values when comparing T0 and T1 (mean differences of the right hands 0.4 ±5.6; mean differences of the left hands 1.2 ±4.5), while they are significantly reduced when comparing T1 and T2 (mean differences of the right hands -3.1 ± 9.3, p=0.049; mean differences of the left hands -3.4 ± 8.9, p=0.012 respectively) (Figure 1A). When stratifying according to clinical manifestation, a higher differences in temperature variations were observed between T1 and T2 in SSc patients with systemic involvement, when compared to those with limited cutaneous SSc (mean of the differences of the right hands -5.0 ±11; mean left-hands differences -4.9 ±11.5 Vs. mean right-hands differences -2.5 ± 11; mean left-hands differences -3.8 ±8.6; p=0.035 respectively) (Figure 1B).

Conclusion: Thermography could represent a reliable, non-invasive, manageable and cost-effective method for the assessment and monitoring of the disease. Thermography has shown excellent potential to be a reliable and objective outcome measures to facilitate clinical trials of novel treatments SSc-related RP.