pressure were detected in all patients with recorded renal lesion during the follow up period (in 11/105 pts with lcSSc, and in 8/33 pts with dcSSc). Renal failure was significantly more frequent in dcSSc pts ($p = 0,04$ - χ^2 test). In 7(21%) pts with dcSSc no criteria for pulmonary and renal involvement were present during the follow up period. On the other hand, in 14(13%) pts with lcSSc pulmonary insufficiency or renal failure were recorded in first 5 years of disease duration.

Conclusion Difuse cutaneous lesions were prognostic sign of lungs and kidneys involvement, as well as pulmonary insufficiency and renal failure in most of the patients, but about 20% of the dcSSc patients were without severe visceral lesions during the 13 years of follow up period. On the other hand, 13% of patients with limited cutaneous lesions had bad prognosis and developed pulmonary insufficiency or renal failure in first 5 years of disease duration.

FRI0190 SURGICAL TREATMENT FOR GASTROESOPHAGEAL REFLUX DISEASE IN SYSTEMIC SCLEROSIS

PD Sampaio-Barros, NA Andreollo, LR Lopes, AG Cunha, AM Samara, NA Brandalise, JF Marques-Neto. *Unit of Rheumatology, State University of Campinas, Campinas, Brazil*

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Background

Objectives To describe the experience with the surgical treatment for gastroesophageal reflux disease (GRD) in systemic sclerosis (SSc).

Methods From 202 patients with the diagnosis of SSc attended at the Scleroderma outpatient clinic in the period 1991–2000, ten patients (5%) who presented GRD, with severe chronic esophagitis and stricture, were submitted to surgical treatment. All the patients were female and eight were Caucasian, with seven presenting limited SSc (mean age 53 years and mean disease duration 17 years) and three diffuse SSc (mean age 44 years and mean disease duration 6 years).

Results The correction of the gastroesophageal reflux was performed through videolaparoscopy in nine patients. Seven patients underwent modified Nissen technique and three patients Lind technique. There was satisfactory clinical response, with significant improvement in the heartburn and dysphagia in all the patients. After a mean followup of 34 months (12–76 months), one patient presented clinical relapse (after 54 months) and another patient needed a surgical resection of a paraesophageal hernia (Y-Roux).

Conclusion The surgical treatment of GRD represents an efficient therapeutic option in SSc patients with severe esophagitis and stricture.

FRI0191 SKIN SCORE IN SYSTEMIC SCLEROSIS

PD Sampaio-Barros, EM Amstalden, AM Samara, JF Marques-Neto. *Unit of Rheumatology, State University of Campinas, Campinas, Brazil*

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Background

Objectives To report the experience with the use of the Total Skin Score (TSS), in the original (OR-TSS) and modified (MR-TSS) Rodnan methods, in systemic sclerosis (SSc), analysing its clinical significance in the model of two (diffuse and limited) and three (diffuse, intermediate and limited) subgroups.

Methods Prospective study analysing skin thickness (assessed using the original and modified Rodnan TSS methods) in 56 patients with SSc. TSS results were compared with SSc clinical variants (divided in the model of two and three subgroups), pathological findings observed in standardised skin biopsies and cutaneous (calcinosis, telangiectasias, pigmentary abnormalities), systemic (articular, vascular, esophageal, pulmonary, cardiac, renal) and laboratory (antinuclear antibody, anticentromere antibody, anti-topoisomerase I antibody) manifestations. Data were analysed on the basis of whether patients had a low TSS ($= < 20$) or a high TSS (> 20), in both methods. Logistic regression analysis was performed to determine the independent variables that influenced TSS (in the two methods) and death (after a 5-year follow-up).

Results There was statistical association between TSS $= < 20$ and limited SSc (both methods, in the SSc model of two subgroups), grade I skin biopsy (OR-TSS) and calcinosis (MR-TSS). The TSS > 20 was associated with diffuse SSc (in the SSc models of two and three subgroups), pigmentary abnormalities and articular involvement (both methods) and grade II and III skin biopsy (OR-TSS). There was a statistical trend between TSS $= < 20$ and calcinosis and anticentromere antibody (OR-TSS), as well as between TSS > 20 and pulmonary restrictive disease (MR-TSS) and anti-topoisomerase I antibody (OR-TSS). The multivariate logistic regression analysis indicated that the clinical variant was the most important factor that influenced significantly TSS (in both methods). In the SSc model of two subgroups, the diffuse variant was associated with TSS > 20 (both TSS methods) and pigmentary abnormalities, with a statistical trend related to pulmonary restrictive disease and anti-topoisomerase-I antibody, whereas the limited variant was associated with TSS $= < 20$, calcinosis and anticentromere antibody. In the SSc model of three subgroups, the diffuse variant was associated with TSS > 20 (both TSS methods) and pigmentary abnormalities, whereas the limited variant was associated with grade I skin biopsy; the intermediate variant was associated with calcinosis and telangiectasias. After a 5-year follow-up, there were 20 deaths (35.7%); the multivariate logistic regression analysis indicated that the vascular involvement influenced significantly death, despite the TSS score.

Conclusion TSS, in both original and modified Rodnan methods, represents an useful tool in the management of the skin involvement in SSc, permitting to differentiate distinct patterns in the clinical spectrum of the disease.

FRI0192 LIPID PROFILE IN PATIENTS WITH SYSTEMIC SCLEROSIS

¹J Goździk, ¹PJ Kotyla, ¹EJ Kucharz, ²L Brzezinska-Wcislo. ¹Department of Internal Medicine and Rheumatology; ²First Department of Dermatology, Medical University of Silesia, Katowice, Poland

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Background Systemic sclerosis (SSc) is an inflammatory connective tissue disorder characterised by collagen proliferation, vascular damage and internal organ involvement. It is speculated that vascular changes in SSc patients may be at least partially secondary to impaired lipid metabolism. Hypothyroidism has been reported in patients with SSc and thyroid involvement may additionally effect lipid metabolism.

Objectives The aim of the present study was to evaluate the serum lipid profile in patients with SSc with regard to their thyrometabolic state.

Methods The group of 49 patients with SSc. (2 man and 47 woman) aged from 18 to 68 yrs (mean 48.16 ± 15.8 yrs) was investigated. Patient group with SSc comprised 13 patients with hypothyroidism and 36 patients with normal thyroid function. Nineteen volunteers (6 men and 13 women) were studied as a controls. Fasting serum total cholesterol, HDL and triglyceride levels as well as thyroid hormones were determined.

Results Increased cholesterol level was shown in patients with SSc. A significantly increased plasma triglyceride concentration and lower HDL level was found in hypothyroid SSc patients as compared to the SSc patients in euthyroid state. There was no differences in total cholesterol level between hypothyroid and euthyroid group of patients with SSc.

Conclusion

- There is no correlation between hypercholesterolemia and thyreometabolic state in patients with SSc
- Increased triglyceride level is secondary to impaired thyroid function in patients with SSc

FRI0193 GASTRIC AND GALLBLADDER MOTILITY IN PATIENTS WITH SYSTEMIC SCLEROSIS: SIMULTANEOUS REAL-TIME ULTRASOUND STUDY

¹PJ Kotyla, ¹EJ Kucharz, ²L Brzezinska-Wcislo, ¹B Sliwinska-Kotyla. ¹Department of Internal Medicine and Rheumatology; ²First Department of Dermatology, Medical University of Silesia, Katowice, Poland

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Background Progressive systemic sclerosis (SSc) is a connective tissue disease where fibrosis of skin and internal organ is a hallmark of disease activity. One of the most affected system in the patients is the alimentary tract.

Objectives The aim of the study was to determine self-related contraction and motor activity between stomach and gallbladder.

Methods Study was performed in a group of twelve patients with SSc. Twelve sex- and age-matched healthy volunteers served as the controls. Gallbladder volume and emptying was assessed after ingestion of fat-rich 300 ml semi-liquid fluid. Changing cross section antrum diameter was measured in the same time.

Results Delayed gastric emptying in patients with SSc was shown. Impaired gastric activity was especially seen in early and late phases of gastric emptying ($p < 0.05$). Gallbladder function was not altered, although compared to controls bile ejection fraction was slightly but statistically non-significant diminished.

Conclusion Gastric motility disturbances observed in patients with SSc are mainly due to its involvement in the course of disease. We postulate that slightly impaired gallbladder function did not augment gastric contraction impairment.

FRI0194 CENTRAL NERVOUS SYSTEM INVOLVEMENT IN PATIENTS WITH SYSTEMIC SCLEROSIS: ELECTROENCEPHALOGRAPHIC STUDY

PJ Kotyla, B Sliwinska-Kotyla, EJ Kucharz, L Brzezinska-Wcislo. Department of Internal Medicine and Rheumatology, Medical University of Silesia, Katowice, Poland

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Background Central nervous system is rare affected in patients with systemic sclerosis. Subtle, very often non-specific symptoms and signs of the brain involvement in the patients were reported.

Objectives The present study was designed to detect and correlate electroencephalographic changes and to correlate them with the other neuro-psychiatric findings in patients with SSc.

Methods The study was performed in 12 SSc patients (11 women and 1 man). A routine 16-leads electroencephalographic records were performed in the patients in morning hours after at least 8 h night rest. The patients underwent the following procedures during EEG examination: hyperpnea, intermittent photic stimulation (stroboscope light at 10 min at 10 to 30 Hz) EEG alteration were classified on the base of following criteria: generalised slow activity (4–6 Hz), and presence of sharp waves, theta (4–6 Hz) delta (2–3 Hz). Focal alterations which fulfil the mentioned criteria were detected with the special attention. In addition every patient underwent The routine neurologic examination was performed in every patients.

Results We recorded alpha rhythm of 9–11 Hz frequency and 20–100 uV amplitude as a basic rhythm in every patients. Nine patients showed no EEG abnormalities. In 5 patients we observed, especially in temporal regions presence of sharp waves induced mainly by hyperpnea. This group of patients presented symptoms of CNS involvement – mainly headaches, parasthesia, ataxia and some psychiatric abnormalities.

Conclusion In the course of SSc even subtle, non-specific symptoms may herald CNS involvement. EEG seems to be valuable method which confirm brain involvement in patients with SSc, presenting neurological and psychiatric abnormalities.

FRI0195 PUPILLOCYNETIC ACTIVITY OF SUBSTANCE P IN SYSTEMIC SCLEROSIS (SSC)

¹A Del Rosso, ¹L Bertinotti, ²M Messori, ¹U Pietrini, ¹R Sicuteri, ¹A Messori, ¹M Fanciullacci, ¹M Maticci Cerinic. ¹Department Internal Medicine, Sect Rheumatology, Headache; ²Drugs Information Center, University of Florence, Florence, Italy

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Background In SSc a dysfunction of peripheral nervous system (PNS) has been showed. SP instillation in human eye induces a cholinergic-independent pupil miosis via specific receptors on neuroirideal junction.

Objectives In order to study PNS function in SSc, we assessed by pupillometry pupil basal diameters and pupil ability to respond to SP instillation in SSc patients and in controls.

Methods 32 SSc patients [17 with limited (lSSc) and 15 with diffuse SSc (dSSc)] and 30 controls underwent pupillometry for evaluating basal iris diameters in both eyes. Then, SP was instilled in one eye [treated eye (TE)] and placebo in the other eye [not treated eye (NTE)] and the pupil response to SP instillation was assessed both in TE and in NTE. In order to verify the existence of a dose-dependence activity of SP, two different SP concentrations (10–3 and 10–5 M) were tested separately. For both eyes, t0 (pupil basal diameter) and AUC (iris pharmacological response to SP instillation) were considered. 2-tailed t-test was used to compare TE with NTE within groups and SSc with HC. ANOVA, Scheffé and Dunnett post-hoc tests were utilised to compare lSSc, dSSc and HC.

Results At t0, basal pupillary diameters of SSc resulted significantly minor in respect to HC ($p < .001$) and significant differences between lSSc and dSSc and HC ($p < .05$), but not between dSSc and HC, were found. Significant differences between SSc and controls were found in the response to SP 10–3 and 10–5, both for TE and for NTE ($p < .05$ in all cases). The TE of lSSc showed a significant major miosis to SP 10–3 and 10–5 instillation vs dSSc and controls ($p < .05$), whereas in