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

10.1136/annrheumdis-2001.274

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

10.1136/annrheumdis-2001.275

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

10.1136/annrheumdis-2001.276

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, Scheffè 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