the TE of dSSc pupillary miosis was not different from controls. In NTE, a significantly different miosis between ISSc and controls was induced by both SP concentrations ($p < .001$), while a significant difference between ISSc and dSSc was found only when SP 10–3 M was used ($p = .002$). In dSSc, the instillation of SP 10–3, but not of SP 10–5 M, induced in NTE a more intense miosis in respect to controls NTE ($p = .004$). The comparison between TE and NTE was significantly different in controls ($p < .001$), but not in ISSc and in dSSc.

Conclusion Our results show that ISSc is characterised by the involvement of neuroirideal junction. In fact, the irideal basal diameter is reduced, and SP induces a more intense miosis in respect both to dSSc and to HC. The lack of difference between TE and NTE could be due to a dysfunction of peripheral nervous system, more likely involving central control mechanisms.

FRI0196 RELATIONSHIP BETWEEN BRONCHOALVEOLAR LAVAGE (BAL) AND HIGH RESOLUTION-CT (HRCT) FINDINGS IN SCLERODERMA LUNG DISEASE

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Background

Objectives We assessed the presence of alveolitis by means of BAL and its correlations with HRCT findings in the diagnosis of systemic sclerosis (SSc)-related interstitial lung disease (SSc-ILD).

Methods 43 nonsmoking patients (pts) with SSc, with a mean age of 54.62 ± 2.08 years (range 23–74), underwent to: bronchoscopy with BAL according to the 1990 American Thoracic Society guidelines;¹ lung HRCT, graded according to a scoring system proposed by Warrick *et al.*;² and SSc-related antibodies testing.

Results Patients with alveolitis (A) and those without alveolitis (NA), divided according to BAL results, were comparable as to mean age and duration of disease, to the prevalence of diffuse or limited subset of disease, to mean values of skin score and to the results of examinations with respiratory function tests, diffusing capacity for carbon monoxide, and inhaled ^{99m}Tc-DTPA for the measure of alveolar clearance rate performed as part of the whole clinical assessment. BAL showed the presence of alveolitis in 18/43 pts (41.8%) with cell profiles so distributed: lymphocytic (L) in 5/18 pts (27.7%); eosinophilic (E) in 1/18 (5.5%); pure neutrophilic (N) in 5/18 (27.7%) and a mixed pattern (3 N + L, 3 N + E, 1 N + L + E) in 7/18 (38.8%). Both “total HRCT” score (14.3 ± 1.2 vs 9.2 ± 1.2 ; $p = 0.01$) and “severity of disease” score (8.8 ± 0.8 vs 6.0 ± 0.8 ; $p = 0.02$) yielded significantly higher values in A pts compared with NA pts. Among HRCT abnormalities, only “honeycombing” (HC) was significantly more frequent in A pts ($p = 0.033$); while the presence of “ground glass” (GG), “irregular pleural margins”, “septal/subpleural lines” and “subpleural cysts” showed no differences between A and NA pts. Anti Scl-70 positivity was more prevalent in A pts ($p = 0.015$) and, whether or not alveolitis was present, it correlated with higher “total HRCT” scores ($p = 0.039$).

Conclusion Seemingly, GG cannot be unambiguously considered as the radiographic sign of alveolitis, since the latter is more prevalent in patients with HC which so, far from being the equivalent of a purely fibrotic outcome, could represent pathologic lung tissue that still retains some ongoing and potentially

treatable inflammatory activity. Moreover, we confirm the role of anti Scl-70 as a negative prognostic marker associated with SSc-ILD.

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FRI0197 PROSTAGLANDIN E1 INFUSIONS AND PLASMA HOMOCYSTEINE IN SYSTEMIC SCLEROSIS

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Background Although elevated plasma levels of homocysteine (Hcy) are considered a risk factor for vascular events, it is still uncertain if the lowering of Hcy by folate restores endothelial function.

Objectives We evaluated the relationship between Hcy and endothelial damage in systemic sclerosis (SSc), measuring plasma levels of von Willebrand factor (vWf), a well accepted marker of endothelial dysfunction, and Hcy, after treatment with PGE1, which has no known interferences with Hcy metabolism and whose long-term benefit is thought to be due to improvement of endothelial function.

Methods Sixty mcg PGE1 (alprostadil alpha-cyclodextrine) in 250 ml 0.9% saline daily were infused daily for a 5 days-period (1st cycle), and after 1 and 2 months for 1 day-period thereafter (2nd and 3rd cycle, respectively) to 10 SSc patients (2 with the diffuse, dSSc, 7 with the limited type, lSSc, 1 with SSc sine scleroderma. Hcy (immunoassay), vWf (ELISA) and folic acid (radioassay) were measured before each cycle.

Results Hcy was reduced vs baseline before the 2nd and 3rd cycle (11.30 ± 3.23 and 12.16 ± 4.86 vs 14.46 ± 5.31 mcM/L, $p < 0.005$ and $p = 0.0616$, respectively; mean $\pm$ SD), with a percent decrease vs baseline significantly greater in dSSc vs lSSc (66.0 ± 9.7 vs $83.1 \pm 7.0\%$, $p < 0.03$ and 64.2 ± 14.5 vs $88.4 \pm 6.0\%$, $p < 0.05$, 2nd and 3rd cycles). vWf was also reduced (167 ± 39 and 156 ± 27 vs 183 ± 12 U/dl, $p < 0.05$), with no differences between lSSc or dSSc. Folic acid did not change (4.68 ± 1.56 , 4.94 ± 2.09 and 4.54 ± 1.71 ng/ml). No relationship was observed between Hcy and vWf.

Conclusion These data are consistent with Hcy as a marker rather than a risk for endothelial damage. Further studies are however needed to evaluate the relationship of Hcy and vWf plasma levels with endothelial function.

FRI0198 THE ULTRASTRUCTURE OF THE MUSCLE COAT OF THE GASTRIC WALL IN A CASE OF SYSTEMIC SCLEROSIS (SSC)

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Background In Systemic Sclerosis (SSc) the gastrointestinal (GI) involvement leads to hypomotility and dysphagia at esophageal

level and severe constipation of the colon,^{1,2} even if other segments of GI are known to be affected in subclinical form.

Objectives Few studies have assessed the morphological features of the stomach in SSc. A 52 years old female with limited SSc from 1979, suffering from dysphagia, pyrosis, epigastric pain, gastro-esophageal reflux, in 1998, underwent to distal esophagectomy for Barrett's oesophagus and, in 1999, to total gastrectomy with Roux y esophago-jejunal anastomosis. The stomach appeared very small, shrunken, its wall being stiff and increased in consistence. Samples were taken to study the ultrastructural modifications of the gastric wall and, in particular, the muscle coat.

Methods Samples of the gastric anterior wall from fundus, corpus and antrum, along the greater curvature, were obtained. The specimens were fixed in 4% glutaraldehyde in 0,1 M phosphate buffer, postfixed in 1% osmium tetroxide in 0,1M phosphate buffer and routinely processed for transmission electron microscopic observation. The ultrathin sections (1 µm) were stained with uranyl acetate and alkaline bismuth subnitrate and observed under Jeol 1010 electron microscope.

Results Wide focal areas of fibrosis, characterised by collagen fibres depositions, surrounding smooth muscle cells (SMC) were found. Many SMC were hypercontracted and/or showed a severe disarrangement of the myofilaments. Often, the dense bodies and the dense bands were thickened. Some SMC showed cytoplasmic vacuolisation and swollen mitochondria. Nerve bundles containing many axons were close to vessels and SMC. The axoplasm of nerve fibres were oedematous and poor in neurotubules and filaments, but the nerve endings close to SMC showed normal morphology, with the presence of synaptic vesicles, whose number was seldom decreased. Blood vessels were lined by intact endothelial cells, while the basement membrane appeared or thickened and laminated. The lumen was partially or completely occluded by erythrocytes and neutrophils. Inflammatory infiltrate as well, and many mast cells rich in granules or partially degranulated, were close to vessels and SMC.

Conclusion In the muscle coat of stomach focal fibrosis, severe ultrastructural modification of SCM and mild nerve fibres involvement are evident, without signs of endothelial damage.

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FRI0199 EVALUATION OF QUALITY OF LIFE IN PATIENTS WITH SYSTEMIC SCLEROSIS BY THE SF-36 QUESTIONNAIRE

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Background

Objectives To evaluate the quality of life of patients affected by systemic sclerosis (SSc) through the application of SF-36 questionnaire and to correlate the results with the disability index of HAQ (DI) and the systemic involvement.

Methods We studied 100 (3 M, 97 F) patients affected by SSc (mean age 60 years, range 39-83, mean duration of disease 6 years, range 1-34). The organic involvement was evaluated by skin score, chest HRCT, electrocardiography according to Holter, Doppler-echocardiography and oesofagogram.

Results In the Table 1 are shown the results of the mean values of the 8 question groups in the control population and in the patients. The 8 question groups are: PA = physical activity, RP = role of physical activity, BP = bodily pain, GH = general health, VT = vitality, SA = social activities, EP = emotional problems, MH = mental health.

A very good correlation was found between the DI and all the scores of SF-36. The skin involvement showed a statistically significant correlation with both the DI ($r = 0.3304$; $p = 0.0008$) and the PA score of the SF-36 ($r = 0.2635$; $p = 0.0081$). No other statistically significant correlation was found between any of the SF-36 dimensions and involvement of a specific organ.

Abstract FRI0199 Table 1

	PA	RP	BP	GH	VT	SA	EP	MH
Mean score of the control population	84.46	78.21	73.67	65.22	61.89	77.43	76.16	66.59
Mean score of the patients	61.35	39.05	50.46	40.92	50.81	67.55	49.96	55.72
Difference%	27.36	50.07	31.51	37.26	17.90	12.76	34.15	16.32

Conclusion SF-36 showed to be a valid instrument to evaluate the quality of life and the disability of patients with SSc and it seems to correlate with extent of skin involvement.

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FRI0200 ELECTROCARDIOGRAPHIC ALTERATIONS IN SYSTEMIC SCLEROSIS AND IN RHEUMATOID ARTHRITIS

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Background Myocardial involvement is a common finding in patients with systemic sclerosis. It is also present in rheumatoid arthritis, but very rarely. Different alterations can be revealed by an electrocardiographic examination.

Objectives Aim of this study was to evaluate and to compare the frequency and type of electrocardiographic alteration in patients with systemic sclerosis and rheumatoid arthritis.

Methods In the study group of 40 pts with SSc (38 female, 2 male mean age $52,85 \pm 12,44$) and 22 pts with RA (20 female, 2 male; mean age $51,45 \pm 11,41$) clinical, laboratory and ECG examination were done. All the patients with SSc were divided into two subgroup: with diffuse (dSSc) and localised (lSSc) SSc. The electrocardiographic data of each of these subgroup were compared. The existence of the next ECG abnormalities were investigated: ventricular premature beats (VPB), supraventricular premature beats (SVPB), arrhythmia absoluta, left bundle branch block (LBBB), left anterior fascicular block (LAFB),