patients the Saliva Ferning Test (SFT), a qualitative test considered positive when fern leaf pattern was abnormal (Andonopoulos AP 1992; Cusumano NC 2000) and a semiquantitative unstimulated whole saliva flow rate test (UWSFR) considered positive for xerostomia when range for wet filter paper was 0–2 cm in 5 min (Lopez Jornet 1993). We evaluated the association between SFT and UWSFR with MSGB focus score III and IV according to Chisholm-Mason gradin system) Chi Squared test and Exact Fisher test was used to compared qualitative variables. P values < 0.05 were considered significant.

Results 21 Patients (58%) had abnormal SFT associated with MSGB focus score III-IV E. Fisher significant ($p < 0.05$) 14 Patients (38%) had UWSFR range 0–2 cm in 5 min with MSGB focus score III-IV, Chi-Squared significant ($p < 0.05$). 12 Patients (33%) both positive SFT and UWSFR had significantly association with MSGB focus score III-IV E. Fisher ($p < 0.05$). We did not find significance, E. Fisher ($p = 6$) when compared SFT with UWSFR.

Conclusion This study suggest that both, easy, safety noninvasive and nonexpensive saliva tests could be performed by the physician like a screening, in those patients with xerostomia and SS suspicion.

FRI0223 LONG TERM FOLLOW-UP IN 68 PATIENTS WITH PRIMARY SJÖGREN'S SYNDROME: CLINICAL AND SEROLOGICAL FEATURES

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10.1136/annrheumdis-2001.316

Background There are few studies, regarding pSS long-term clinical course. Moreover, it has often been studied in limited groups of patients, employing different recruitment and diagnostic criteria.

Objectives During a 10 years follow-up we longitudinally studied the clinical evolution, the rate of severe complications and mortality in a large cohort of patients with pSS.

Methods We evaluated 68 consecutive outpatients with pSS according to the Fox's criteria: 67 females and 1 male, followed since January 1987 to November 2000. The patients were divided into 2 groups according to the autoantibodies pattern at the diagnosis: anti-Ro and/or La positive and anti-Ro/La negative. The prevalence of several clinical and serological abnormalities, evaluated at the beginning of the study, was compared with the prevalence observed at the end of the follow-up. Moreover, a 10 years Kaplan-Meier survival analysis was performed, considering as end points the development of lymphoproliferative disorders, death and the association death/lymphoproliferation, in order to establish how the progression of the disease might affect survival and major morbidity of pSS. Finally, we analysed whether pSS is associated with an increase of the mortality rate in comparison with the general population.

Results Eight patients from the study group died (13.2% up to 10 years of follow-up). The prevalence of arthritis in Ro and/or La positive cases was significantly higher at the beginning of the follow-up in comparison with the end of the study ($p = 0.041$). On the contrary, a significant higher prevalence of lymphoproliferative disorders was present in Ro and/or La positive group at the end of the follow-up ($p = 0.041$). We also observed significantly lower levels of C4 and significant higher IgG, IgA and ESR in the Ro and/or La positive group than in the Ro/La

negative group, either at the beginning (respectively $p = 0.003$ $p < 0.0001$ $p = 0.0014$ $p = 0.0007$) or at the end ($p = 0.007$ $p = 0.0005$ $p = 0.013$ $p < 0.0001$) of the follow-up. Lymphoproliferative disorders were diagnosed in 5 patients. The development of this complication was associated with the assessment, in all the cases, of purpura, parotid swelling and low C4 levels. The 10 years-survival rate of all the pSS patients resulted 86.5% that was under the survival rate of the Italian general population (90%) ($p = n.s.$).

Conclusion The glandular manifestations of pSS were distinctively present in the majority of the patients already at the time of the diagnosis and the serological picture remained typically constant during all the follow up. Increased IgG, IgA and ESR as well as low C4 levels were significantly prevalent in the Ro and/or La positive group. Finally, we have not found any significant increase in the mortality of pSS patients in comparison with the general population.

FRI0224 LYMPHOPROLIFERATIVE DISORDERS IN PRIMARY SJÖGREN'S SYNDROME: A TEN YEARS FOLLOW-UP STUDY OF 68 CASES

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10.1136/annrheumdis-2001.317

Background Primary Sjögren's syndrome (pSS) is a systemic autoimmune disease chiefly involving salivary and lacrimal glands, associated with a high risk of developing non Hodgkin's lymphoma (NHL) (about 44 times higher than in the general population), usually B-cell lymphomas of mucosa associated lymphoid tissue (MALT). Anyway, the most frequent histologic lesion of major salivary glands of pSS patients is myoepithelial sialadenitis (MESA).

Objectives We longitudinally studied the prevalence and the clinical features of lymphoproliferative disorders in a large cohort of pSS patients throughout a 10-years follow-up period.

Methods We evaluated 68 consecutive outpatients, affected by pSS according to the Fox's criteria, followed since January 1987 to November 2000. Patients were divided into two groups, according to their autoantibodies pattern at the time of diagnosis: anti-Ro and/or La positive vs anti-Ro/La negative. We excluded patients affected either by secondary SS or associated to other connective tissue diseases and HCV infection, or by isolated keratoconjunctivitis sicca and those taking drugs causing sicca syndrome. We even calculated the relative risk on the basis of incidence rate of NHL as reported by Italian Cancer Registry.

Results Lymphoproliferative disorders were diagnosed in 5 (7.35%) patients. Lymphoproliferation was significantly prevalent in the Ro/La positive group ($p = 0.041$). We recorded 2 cases of NHL of intermediate or low grade malignancy (1 rhinofaryngeal plasmocytoma associated with glomerulonephritis and monoclonal crioglobulinemia and 1 parotid MALToma) and 3 pre-neoplastic disorders (2 cases of MESA and 1 case of renal lymphoproliferative disorder). The latter died of melanoma 4 years after the diagnosis of lymphoproliferative disorder. In all the cases the development of a lymphoproliferative disorder was associated with purpura, parotid swelling and low C4 levels, either at the time of diagnosis or during the follow-up. Kaplan-Meier rates analyses showed that MESA and NHL represented late occurring events in the course of pSS. According to our results, the relative risk (RR) to develop NHL was 36.1 for the

whole group with pSS ($p < 0.001$), while for the Ro and/or La positive group was 47.1. Ten years survivorship in pSS patients was not significantly lower with respect to the general population (86.5 vs 90%) calculated with the aid of life tables of the Italian general population (matched for age and sex).

Conclusion Patients with purpura, parotid swelling, low C4 levels and cryoglobulinemia present an increased risk to develop lymphoproliferative disorders. These clinical and laboratory findings seem to identify a subgroup of patients with pSS which should be controlled and, maybe, treated in a different way.

FRI0225 GLUCOCORTICOSTEROID AND CYTOTOXIC THERAPY

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10.1136/annrheumdis-2001.318

Background

Objectives To assess the effect of long-term glucocorticosteroid (GCS) low doses and cytostatics taking on clinical-laboratory SS manifestations.

Methods 500 SS pts divided into 4 groups were included into the study. 1st group – 200 of SS pts had 5 mg of Prednisolone daily, 1.8 for a year, 0.9–1.8 for subsequent years and chlorobutin – 2 mg daily for a year, 360–720 mg for the next 5–15 years. 2nd group – 100 SS pts had Prednisolone according the same scheme and cyclophosphane 200 mg twice a month, 4.8 mg for a year, 2.4–4.8 g for the next 5–15 years. 3d group – 100 SS pts had Prednisolone according the same scheme for 5–15 years. 4th group – 100 SS pts had only substitution therapy. Reliable improvement of stomatological (decrease of salivary glands, disappearing or decrease of frequency of parotitis, increase of salivation), ophthalmologic (residing of cornea dystrophy) and some systemic manifestations disappearing of artralgia, regional lymphadenopathy, decrease of morning stiffness) were noticed only in the first three groups of pts and in the 1st and 2nd groups it was more pronounced (<0.001). Only in the 1st and 2nd groups disappearing of purpura relapse in the third of pts. ESR, fibrinogens levels, general protein, G-globulins, 3 classes of immunoglobulins, CIC and RF titers decrease in 5 years was found only in the 1st and 2nd groups of pts ($p < 0.001$). Substantial improvement (1st, 2nd groups – 30%, 3d – 10%) and moderate improvement (1st, 2nd groups – 25%, 3d – 20%) was found only in pts with cytostatics and GCS therapy. 30% (1st and 2nd groups) and 40% (3d group) pts needed more potent therapy, whereas 60% (4th) of pts had therapy due to development of different stage of severity of systemic manifestations.

Results

Conclusion Obtained data demonstrate the necessity of low doses of GCS and chlorobutin/cyclophosphane in early terms of SS with glandular manifestations. In some cases such therapy is effective during systemic manifestations of the disease which is not dangerous for the life of patient.

FRI0226 EFFECT OF LOW DOSES OF PREDNISOLONE ON BONE MINERAL DENSITY (BMD) IN SJOGREN'S SYNDROME

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10.1136/annrheumdis-2001.319

Background Lately the effect of corticosteroids on BMD during different diseases including autoimmune ones was widely discussed.

Objectives To determine the effect of long-term (>5 years) taking of Prednisolone in daily dosage of 2–2.5 mg on BMD in pts with Sjogren's syndrome (SS).

Methods 112 female pts aged 33–73 with reliable SS diagnosis were examined. 56 (50%) out of them were treated for more than 5 years by low doses of hormones. As it was evident that menopausal beginning influenced BMD, all examined persons were divided into 4 groups: pts with retained menstrual cycle who did not receive hormones (1st group – 32pts with median age 40.7(7.8 years) and those who for a long time took low doses (<5 mg/day) of Prednisolone (2nd group – 24 pts with median age 41.5(4.7 years); women of postmenopausal period who were never treated by hormones (3d group – 24 pts aged 57.5(6.7 year, postmenopausal period 7.3(0.8 years) and those who for a long time took low doses of Prednisolone (4th group – 32 pts aged 52.3(5.6 years; postmenopausal period 8.1(0.7 years). All groups of pts were comparable by weight and height coefficient. Assessment of BMD in lumbar area of the spine (L1-L4) and left femoral neck was carried out by double X-ray absorptiometry on densitometer QDR-1000 («Hologic», USA). Statistical analysis was done by Student's t-criterion and (2 criterion).

Results BMD in L1-L4 was correspondingly to 1–4 groups: 1.030(0.128 g/cm², 0.983(0.100 g/cm², 0.858(0.123 g/cm² and 0.837(0.124 g/cm², there were no reliable difference in comparison of 1st and 2nd, 3d and 4th groups. BMD in femoral neck was as follows according to groups: 0.891(0.115 g/cm², 0.815 (0.104 g/cm², 0.740(0.116 g/cm² and 0.763(0.090 g/cm². During analysis it turned out that BMD in femoral neck in the 2nd group was reliably lower than in the 1st group ($t = 2.59$, $p < 0.01$), during comparison of the 3d and 4th group there were no differences. In the 1st and 2nd groups there was no osteoporosis ($T < 2.5$ SD), osteopenia ($T < 1.0$ SD) in L1-L4 and in neck developed correspondingly in 25% and 18.75% of cases in the 1st group and in 33.3% and 41.7% in the 2nd group. In the 3d and 4th groups osteoporosis and osteopenia developed mainly with equal frequency in corresponding areas.

Conclusion In women with retained menstrual cycle the long-term taking of low doses of Prednisolone results in BMD decrease in femoral neck, frequency of osteopenia grows but osteoporosis in this case does not develop. In postmenopausal period taking of low doses of hormones has no substantial effect on the frequency of osteoporosis and osteopenia development.

FRI0227 MONOCLONAL SECRETION DURING SJOGREN'S SYNDROME (SS)

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10.1136/annrheumdis-2001.320

Background Finding of monoclonal immunoglobulins and light chains in serum and urine of SS pts suggests the possibility of SS transformation into malignant lympho-proliferative diseases.

Objectives To characterise the spectrum of monoclonal secretion in SS, to evaluate the role of monoclonal immunoglobulinopathy in the development of I-secreting lymphomas in SS.

Methods 24 females aged 25–75 years (49.2(3.4) with SS duration of 2–28 years admitted into Institute of Rheumatology