AB0025 STUDY OF LYMPHOCYTE PHENOTYPE IN RHEUMATOID ARTHRITIS PATIENTS

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Background

Objectives To examine the expression of surface markers on lymphocytes in patients with rheumatoid arthritis (RA).

Methods Peripheral blood samples were obtained from 36 patients with active RA (mean disease duration 8,8 years, mean age 54,8 years) and 18 normal subjects. The patients were treated with NSAIDs, DMARDs and prednisolone. Fluorescent flow cytometry on FACScan (Becton Dickinson) was used to assess the expression of CD3, CD4, CD5, CD7, CD8, CD11b, CD16, CD18, CD20, CD25, CD26, CD50, CD54, CD56, CD71, CD95, HLA-DR antigens.

Results The expression of CD16 antigen on peripheral blood lymphocytes was elevated as compared with healthy volunteers ($16,5 \pm 1,7\%$ vs $11 \pm 1,5\%$, $P = 0,03$).

The percentage of lymphocytes expressing CD95 antigen was higher in patients treated with NSAIDs ($n = 24$) as compared with controls ($32,9 \pm 3,6\%$ vs $25,6 \pm 2,9\%$, $P = 0,05$). The expression of CD 95 antigen correlated with expression of antigens ND26 ($r = 0,77$), CD71 and CD25 ($r = 0,6$).

Conclusion Lymphocyte phenotype in RA patients is characterised by the increased expression of CD16.

AB0026 LYMPHOCYTIC EXPRESSION OF P-GLYCOPROTEIN ON PERIPHERAL BLOOD IN RHEUMATOID ARTHRITIS PATIENTS

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Background

Objectives To examine the expression of the multidrug resistance P-glycoprotein (P-gp 170) in patients with rheumatoid arthritis (RA). P-gp 170 is a pump molecule which decreases intracellular drug concentrations by increasing drug efflux from cells.

Methods Peripheral blood samples were obtained from 10 patients with active RA, and 8 normal subjects. The patients were treated with NSAIDs. Previous therapy with DMARDs was ineffective in 7 patients. 3 patients were not treated with DMARDs. Fluorescent flow cytometry on FACScan (Becton Dickinson) was used to assess the expression of P-gp 170, with monoclonal antibodies (UIC2 PE, Immunotech).

Results The expression of P-gp on peripheral blood lymphocytes was elevated compared with control ($29,6 \pm 9,4\%$ vs $1,6 \pm 0,4\%$, $P = 0,03$). We did not observe any association between glycoprotein P expression and age, sex, disease activity, duration and stage of RA. The expression of P-gp 170 correlated with expression of antigens CD8 ($r = 0,85$) and CD71 ($r = 0,83$).

Conclusion The patient with RA showed increased expression of P-gp 170 as compared to the control. Further studies are needed to evaluate the potential implication of P-gp in drug resistance in RA.

AB0027 TNF-ALFA RESPONSES INDUCED BY DIFFERENT ENTEROBACTERIA AND GRAM-POSITIVE CELL WALLS OF NORMAL INTESTINAL MICROBIOTA IN EARLY RHEUMATOID ARTHRITIS

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Background The aetiology of the rheumatoid arthritis (RA) is unknown. A variety of infective agents have been proposed to be the etiological factor of the disease.

Objectives To study whether enterobacteria and Gram-positive bacterial cell walls (BCW) derived from normal intestinal microbiota are involved in the etiopathogenesis of early rheumatoid arthritis.

Methods Peripheral blood mononuclear cells (PBMC) and synovial fluid mononuclear cells (SFMC) were isolated from patients with early RA (the average duration of 3 months). The tumour necrosis factor-alpha (TNF-alfa) responses to heat-killed *Salmonella enteritidis*, *Yersinia enterocolitica* and *Escherichia coli*, and to Gram-positive BCW derived from four common intestinal indigenous bacteria, *Eubacterium aerofaciens*, *Eubacterium limosum*, *Lactobacillus casei* and *Lactobacillus fermentum*, and a BCW derived from a pathogen, *Streptococcus pyogenes* were investigated.

Results The results obtained indicate that these bacterial antigens induce TNF-alfa responses of PBMC and SFMC from at least some patients with early RA. However, the responses are not specific for any particular bacterial antigen tested. The responses observed are similar to those observed in the patients with other inflammatory arthritides.

Conclusion These results suggest that SFMC reacting with BCW exist in some patients with early RA. They are in agreement with the hypothesis that BCW derived from normal intestinal microbiota might be involved in the etiopathogenesis of chronic arthritides, including RA.

AB0028 THE SERUM LEVELS OF SOLUBLE ICAM-1, NITRIC OXIDE AND XANTHINE OXIDASE IN RHEUMATOID ARTHRITIS

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Background

Objectives This study was carried out to determine the serum levels of soluble intercellular adhesion molecule 1 (ICAM-1), nitric oxide and xanthine oxidase in patients with rheumatoid arthritis (RA) and to investigate the correlations between sICAM-1 and nitric oxide and xanthine oxidase.

Methods Serum samples were obtained from 30 patients with active RA and 20 healthy control subjects. sICAM-1, nitric oxide and xanthine oxidase levels were determined.

Results sICAM-1, nitric oxide and xanthine oxidase levels were significantly elevated in patients with RA ($p < 0.001$). We found a significant positive correlation between sICAM-1 and nitric oxide ($r = 0.426$, $p < 0.05$). There was also a significant positive correlation between sICAM-1 and xanthine oxidase ($r = 0.518$, $p < 0.01$).

Conclusion High levels of s ICAM 1 may be a consequence of inflammation or tissue damage made by nitric oxide generated by xanthine oxidase.

AB0029 SELECTIVE INHIBITION OF COX-2 ON ACID-INDUCED GASTRIC ULCERS: COMPARISON OF MELOXICAM, PIROXICAM AND NIMESULIDE

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Background Non-steroidal anti-inflammatory drugs are known to have adverse effects on the gastro-intestinal system through the inhibition of prostaglandin synthesis by cyclooxygenase-1 (COX-1). Reducing inflammation by selectively inhibiting COX-2 has reduced gastrointestinal side effects. The effect of selective COX-2 inhibition or non-selective inhibition on the aggravation of gastric lesions due to other causes, however, has not been thoroughly examined.

Objectives We tested the hypothesis that agents that selectively inhibit COX-2 (meloxicam and nimesulide) would aggravate HCL-induced gastric lesions in rats less than a nonselective inhibition (piroxicam).

Methods Gastric lesions were induced in male rats (N = 10 per group) using 0.45 N HCL. The test drug (1.5 or 3 mg/kg) was administered s.c. 60 min before the instillation of HCL (1 ml/100 g BW) into the stomach. One hour later the animals were euthanized and the stomachs were removed, rinsed, opened along the greater curvature and photographed. Lesions were quantified in the fundus region using computer-assisted planimetry of the digital images.

Results The stomach area of all groups was comparable. The results in terms of absolute ulcer area, ratio of ulcer area to total fundus area and this ratio as compared to the control group is summarised in the following Table 1.

Abstract AB0029 Table 1

	Meloxicam 1.5 mg/kg	Meloxicam 3 mg/kg	Nimesulide 1.5 mg/kg	Nimesulide 3 mg/kg	Piroxicam 1.5 mg/ kg	Piroxicam 3 mg/kg
Ulcer Area (mm ²)	117 ± 24	105 ± 16	99 ± 18	137 ± 21	141 ± 21	166 ± 15*
Ratio ulcer/ fundus	14.3 ± 2.8	12.6 ± 1.6	11.7 ± 2.1	16.5 ± 2.6	17.4 ± 2.9	20.2 ± 1.9*
% Control	10.2	-3.1	-10.4	27.0	33.9	55.5*

Conclusion This *in vivo* test supports the hypothesis that selective inhibition of COX-2 has less effect on acid-induced gastric ulcers in rats than a nonselective inhibition. In this test meloxicam had no effect on gastric lesions, nimesulide only a trend for ulcer enhancement but piroxicam produced a clear augmentation of HCL-induced gastric lesions.

AB0030 BIOPSY FINDINGS IN ADULT-ONSET STILL DISEASE

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Background The differential diagnosis of adult-onset Still disease involves cancer, infections and other rheumatic diseases. Thus, differential diagnosis frequently requires the performance of biopsies. However, there are not many reports about histological findings in these patients.

Objectives To describe biopsy findings in patients with adult-onset Still disease.

Methods We have studied biopsies from 35 patients with adult-onset Still disease performed between April of 1979 and December of 1999 in Salvador Zubirán Nutrition Institute.

Results 60% of all patients adult-onset Still disease underwent a biopsy. In lymphatic ganglions, which constitute the most frequent biopsy, the main finding is the loss of structure with lymphoid follicles of variable size and a sinusoidal part widened with arteries with hyalines and gross walls. In some samples, areas of necrosis and haemorrhage were found. In the liver appeared focal infiltrates of polymorphonuclear leukocytes in hepatic lobulillar and lymphoplasmocytaries accumulates in porta spaces. In some patients an opening of sinusoidal and Disse spaces with focal necrosis area was described. In the spleen, polymorphonuclears were identified in red pulp, with a moderate amount of plasmatic cells and eosinophils, and an important widening of arterial walls. White pulp did not showed any disturbance. In the skin, it was demonstrated the presence of polymorphonuclears and lymphocytes infiltrates with a perivascular and perianaxial predominance. Paraqueratosis areas were also described. Perivascular inflammatory infiltrates in the muscle with areas of necrosis were described. In the lung, a broadening of alveolar walls because of an inflammatory infiltrate composed by polymorphonuclears and lymphocytes was described. Areas of haemorrhage were also described.

Conclusion We have not found any characteristic histological finding of Still disease in the adult. In most of the biopsies predominate non-specific inflammatory infiltrates.

AB0031 PROTEIN SULFHYDRYLS AND CARBONYL CONTENT CHANGES IN SERA OF RHEUMATOID ARTHRITIS PATIENTS

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Objectives Oxygen free radicals play a major role in the generation of acute and chronic inflammatory processes one of which is Rheumatoid Arthritis (RA). Biological thiols or sulfhydryls protect cells against oxidative stress. Introduction of carbonyls into proteins is the consequences of the protein oxydation. This study is planned to investigate the roles of oxygen free radicals in rheumatoid arthritis.

Methods In this study; according to ACR criteria, a total of 29 RA patients (M/F = 7/22) aged between 31 to 68 years old are included. They were physically evaluated by the number of tender points. Rutin laboratory investigations (ESR, CRP, RF, biochemically parameters) were also evaluated. Control group were