SAT0035 ANKYLOSING SPONDYLITIS, PSORIATIC ARTHRITIS AND REACTIVE ARTHRITIS SHOW INCREASED BONE RESORPTION AND DIFFER WITH REGARD TO BONE FORMATION

¹J Grisar, ¹M Aringer, ¹K Redlich, ²PM Bernecker, ³W Wolozczuk, ¹JS Smolen, ⁴P Pietschmann. ¹Department of Internal Medicine III; ²Department of Internal Medicine III; ³Ludwig Boltzmann Institute of Experimental Endocrinology, Division of Rheumatology; ⁴Department of Pathophysiology, Vienna, Austria

10.1136/annrheumdis-2001.387

Background It is well established that rheumatoid arthritis is associated with severe alterations of bone metabolism. In seronegative spondylarthropathies (SSPs), however, data on bone turnover are scarce and conflicting.

Objectives

Methods We studied biochemical markers of bone resorption (urinary deoxy-pyridinoline (D-Pyr) and cross-linked telopeptide of collagen-1 (ICTP)), bone formation markers (osteocalcin (OC) and bone specific isoenzyme of alkaline phosphatase (BAP)) as well as serum levels of osteoprotegerin (OPG, a glycoprotein which prevents the differentiation and activation of osteoclasts) in 30 patients with ankylosing spondylitis (AS), 23 patients with psoriatic arthritis (PsoA), 10 patients with reactive arthritis (ReA) and sex- and age matched healthy controls (HC).

Results Markers of bone resorption were significantly increased in AS, PsoA and ReA patients (Table 1). In contrast, bone formation markers were found to be heterogeneous: OC was increased in AS, but not in PsoA or ReA and the levels of BAP were elevated only in patients suffering from PsoA (Table 1). Serum levels of OPG were significantly increased in the AS and PsoA-group (Table 1). Furthermore, dual energy x-ray absorptiometry (DXA) measurements of the lumbar spine and the femoral neck, performed in a subgroup of patients, showed clearly decreased T-scores (lumbar spine -0.99 ± 1.33 , femoral neck -1.95 ± 1.33) in patients suffering from AS. In PsoA bone mineral density was within the normal range. * = $p < 0.05$. ** = $p < 0.001$.

Abstract SAT0035 Table 1 OPG, markers of bone formation and markers of bone resorption in patients and control groups

	AS	HC	PsoA	HC	ReA	HC
OPG	44.3 ± 19.7 *	32.7 ± 7.6	47.4 ± 22.6 *	35.7 ± 8.3	45.3 ± 23.2	37.3 ± 11.1
BAP	11.0 ± 4.5	10.4 ± 3.6	12.5 ± 4.6 *	9.8 ± 3.1	9.1 ± 3.3	9.1 ± 2.5
OC	22.0 ± 6.8 *	18.2 ± 5.7	20.7 ± 7.3	17.8 ± 5.7	16.8 ± 3.4	15.3 ± 5.0
ICTP	4.7 ± 1.6 **	3.2 ± 0.7	4.8 ± 1.8 **	3.1 ± 0.6	4.8 ± 1.4 **	3.2 ± 0.8
D-Pyr nmol/mmol creatinine	6.4 ± 2.7 **	4.5 ± 1.4	6.2 ± 2.2 **	4.2 ± 1.5	8.0 ± 3.4 *	4.5 ± 1.1

Conclusion Our results suggest significant alterations of bone metabolism in patients with SSPs. It is tempting to speculate that the increased OPG levels in AS and PsoA may represent a compensatory mechanism following enhanced bone resorption.

SAT0036 SUCCESSFUL TREATMENT OF SAPHO SYNDROME WITH INFILIXIMAB: REPORT OF TWO CASES

¹I Olivieri, ¹A Padula, ¹G Ciancio, ²C Salvarani, ³N Niccoli, ³F Cantini. ¹Rheumatology Department of Lucania, San Carlo Hospital, Potenza, Italy; ²Rheumatic Disease Unit, Arcispedale Santa Maria Nuova, Reggio Emilia, Italy; ³Rheumatic Disease Unit, Prato Hospital, Prato, Italy

10.1136/annrheumdis-2001.388

Background SAPHO syndrome (synovitis, acne, pustolosis, hyperostosis, osteitis) syndrome shares manifestations and clinical association with the spondyloarthropathy (SpA) complex.

Nonsteroidal anti-inflammatory drugs (NSAIDs) are the first choice but have limited efficacy. Second-line drugs have been tried with mixed results. Positive effects with pamidronate, which partly works by blocking tumour necrosis factor alpha (TNFalpha), have recently been reported. Infliximab, a chimeric anti-TNFalpha monoclonal IgG1 antibody, has recently been proved to be effective in ankylosing spondylitis (1) and psoriatic arthritis.¹⁻³

Objectives To evaluate the effect of infliximab in patients with SAPHO syndrome resistant to NSAIDs and second-line drugs.

Methods Two patients meeting criteria for SAPHO syndrome and with chest wall pain limiting normal activity despite adequate treatment with NSAIDs and who had failed second-line therapy received three intravenous infusions of infliximab (5 mg/Kg) at weeks 0, 2, and 6. One of the two patients had skin manifestations consisting in severe acne at baseline. Patients were evaluated at baseline and on days 3, 7, 14 and from then every two weeks for the following variables: anterior chest wall pain, swelling and tenderness, erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP).

Results The two patients had a complete response to therapy 3 days after the first infusion of infliximab and discontinued NSAID therapy. Chest wall swelling and tenderness remitted and CRP became normal. Severe acne dramatically improved in one week after the first infusion. Patients remained symptom-free after the third infusion up to 2 months' follow-up. Infliximab treatment was well tolerated, with no adverse event.

Conclusion Infliximab seems to be an effective drug in SAPHO syndrome. A larger, controlled, double-blind study is required.

REFERENCES

- 1 Brandt J, et al. *Ann Rheum Dis*. 2000;**43**:1346-52
- 2 Van der Bosch F, et al. *Ann Rheum Dis*. 2000;**59**:428-33
- 3 Antoni C, et al. *J Rheumatol*. 2000;**27**(Suppl 59):24

SAT0037 MYOCARDIAL INVOLVEMENT IN PATIENTS WITH ANKYLOSING SPONDYLITIS

¹N Tas, ¹S Alpaslan, ²M Alpaslan. ¹Physical Medicine and Rehabilitation, Gazi University, Faculty of Medicine, Ankara, Turkey; ²Cardiology, Afyon Kocatepe University, Afyon, Turkey

10.1136/annrheumdis-2001.389

Background Ankylosing spondylitis (AS) is a chronic systemic disease that may involve aorta and the heart. Aortitis, aortic valve insufficiency, pericarditis, cardiac conduction abnormalities and cardiomegaly have been reported in patients with AS. It is not clear whether cardiac muscle changes are due to primary involvement of the cardiac muscle or secondary to aortic and valvular involvement in this disease.

Objectives To evaluate the presence of ongoing myocyte necrosis in patients with active AS.

Methods 8 patients with active AS (2 women and 6 men, mean age 36 years) were included in this study. AS was diagnosed according to the New-York criteria. Disease activity was assessed by erythrocyte sedimentation rate (ESR) and serum levels of C-reactive protein (CRP). None of the patients had macrovascular complications such as hypertension or clinical evidence of cardiac valvular insufficiency. Sex- and age-matched 8 healthy adults formed the control group. Myocardial involvement was evaluated by serum levels of cardiac specific troponin-I, an intracellular cardiac protein that is not detected in blood unless myocyte necrosis occurs.

Results Mean duration of disease activity was 8 years. Electrocardiograms were normal in all subjects. The ESR and CRP levels were elevated in all patients with AS (mean values were 39 mm/h and 34 mg/l respectively) while they were normal in controls (mean values were 11 mm/h and 2 mg/l respectively). Cardiac specific troponin-I was not detected in the serum of any subject.

Conclusion The absence of cardiac specific troponin-I in the serum of patients with active AS suggest that there is no ongoing primary myocyte necrosis in the active stage of this disease. Previously reported cardiac abnormalities in this disease can be the result of aortic involvement including aortic valve insufficiency.

REFERENCES

- 1 Van Der Linden S, Valkenburg HA, Cats A. Evaluation of diagnostic criteria for ankylosing spondylitis. A proposal for modification of the New-York criteria. *Arthritis Rheum.* 1984;**27**:361-8
- 2 Bergfeldt L, Insulander P, Lindblom D, et al. HLA-B27: an important genetic risk factor for lone aortic regurgitation and severe conduction system abnormalities. *Am J Med.* 1988;**85**:12-18
- 3 Graham DC, Smythe HA. The carditis and aortitis of ankylosing spondylitis. *Bull Rheum Dis.* 1958;**9**:171-4

SAT0038 EVALUATION BY DUAL X-RAY ABSORPTIOMETRY (DXA) OF BODY COMPOSITION IN ANKYLOSING SPONDYLITIS (AS) PATIENTS

E Mendonça, VM Montenegro, C Belleza, L Takayama, FR Lima, CR Gonçalves, LR Battistella. *Division of Rheumatology and Division of Rehabilitation, University of São Paulo, São Paulo, Brazil*

10.1136/annrheumdis-2001.390

Background

Objectives To evaluate body composition in patients with severe AS of long duration and predominant axial involvement by DXA.

Methods Forty-one AS male patients with mean age $38,9 \pm 7,26$ sd years old (23-50 years), and thirty-four controls matched for age, sex, race, weight, height were studied. Body composition was measured by DXA (HOLOGIC QDR 2000) and was compared in the two groups. BMD was also measured in two sites: lumbar spine (L1-L4) and femoral neck.

Comparisons were performed for the group of patients and controls. Differences were analysed using x2-test, Student test and Pearson test. Statistical significance was taken at $p < 0,05$.

Results Body-composition indexes (BMD g/cm², BMC g/cm², fat mass, lean mass, fat mass percentage) were analysed. Patients with AS had a lower total lean mass ($47,72 \text{ kg} \pm 5,82 \text{ sd}/55,34 \text{ kg} \pm 5,48 \text{ sd}$) and lower total bone mass ($1,04 \text{ g/cm}^2 \pm 0,96 \text{ sd}/1,13 \text{ g/cm}^2 \pm 1,16 \text{ sd}$) in comparison with controls. The analysis of BMD-lumbar spine and BMD-femoral neck showed low values ($0,996 \text{ g/cm}^2 \pm 0,20 \text{ sd}/0,752 \pm 0,15 \text{ sd}$) respectively. The diagnosis of osteoporosis/osteopenia was made by WHO criteria. Additionally, there was a difference in the fat mass percentage,

but it may be result of age rather than of disease. There was a significant correlation between the reduction of lean mass and bone mass and Schober test, weight and height ($p < 0,05$).

Conclusion Measures of body composition in AS patients can be important to investigate structural severity of the disease, so prevention of deformity can be promoted early. Low values of lean mass was observed in parallel with osteoporosis, that is frequent finding in male patients with AS.

This analysis showed a positively correlation between lower total lean/bone mass and anthropometric measures, probably secondary to the pathologic loss of mobility in the spine and rizo-melic joints. Then, this appropriate evaluation of the musculo-skeletal changes may be a new approach for effective rehabilitation in AS patients.

SAT0039 CLINICAL CHANGES IN OLIGOARTICULAR FORMS OF PSORIATIC ARTHRITIS AFTER A COURSE OF FIVE YEARS

MD Lopez-Montilla, A Escudero, M Romero, V Perez, C Castro, J Gonzalez, MC Muñoz-Villanueva, E Collantes. *Rheumatology, Hospital Universitario Reina Sofia, Cordoba, Spain*

10.1136/annrheumdis-2001.391

Background One of the most salient features of psoriatic arthritis is the wide variety of clinical manifestations it can exhibit. This facilitates interrelationships among its clinical forms and changes from one to another.

Objectives To evaluate the clinical manifestations of patients with psoriatic arthritis of initially oligo-articular form after a course of five years.

Methods An overall 32 patients with psoriatic arthritis of initially oligoarticular form (viz. with fewer than three joints affected in an unsymmetric form) were examined and the specific form prevailing after a course of five years was determined. Simultaneously, clinical activity was studied on the basis of the following criteria: (a) morning stiffness for less than 15 min; (b) absence of fatigue; (c) absence of articular pain; (d) absence of pain in response to pressure or movement; (e) absence of swollen joints; (f) VSG below 30. Those patients fulfilling at least five of the previous six criteria were considered to be in remission.

Results The following Table 1 classifies the patients according to status and clinical form of the disease.

Abstract SAT0039 Table 1

	Clinical form after 5 years	Polyarticular	Spondyloarthritis
	Oligoarticular		
Clinical Form Active	0	13	9
Clinical Form in remission	6	1	3
Total Clinical Form	6	14	12

Conclusion Our results confirm that oligoarticular forms of psoriatic arthritis are not static, but rather change during the course of the disease.