observed. Injection of YeO8 was repeated two weeks later in a dose 8×10^8 , but it also showed no joint swelling. Third inoculation (6×10^9) of YeO8 induced arthritis in 40% of rats on day 10 after the last injection (swelling scores 1.5–3). Joint swelling decreased to the level of 1 score in 3 weeks. In the 2nd experiment, injection of YeO8 in a dose of 1×10^8 induced joint swelling in 20% of rats. Repeated injection of higher dose (3×10^8) two weeks later induced ReA in 40% of animals (swelling scores 1.5–4), but 3 weeks after the last injection it was observed only in 20% of rats (swelling score 2). In the 3rd experiment high dose of YeO8 (1×10^9) was used and it caused the lethality of 50% of rats. One week after Ye inoculation joint swelling (score 2) developed in 20% of animals. All arthritides were confirmed by histology.

Conclusion The incidence of arthritis varied by using different bacterial doses. Although i.v. injection of YeO8 in lower doses showed no signs of joint swelling, repeated injections were able to cause ReA, but the doses of bacteria were extremely high. The use of high doses of YeO8 for previously non-infected animals, showed high lethality, which didn't correlate with a high incidence of arthritis.

REFERENCES

- 1 Gripenberg-Lerche C, Toivanen P. Variability in the induction of the experimental arthritis: *Yersinia* associated arthritis in Lewis rats. *Scand J Rheumatol*. 1994;**23**:124–7
- 2 Di Genaro MS, Escudero ME, Muñoz E, et al. Arthritogenicity of *Yersinia enterocolitica* O:8 in hamsters: analysis of the immune response. *Folia Microbiol (Praha)* 1998;**43**(6):690–6

SAT0218 CLINICO-LABORATORY PARALLELS BETWEEN ACUTE RHEUMATIC FEVER AND POSTSTREPTOCOCCAL REACTIVE ARTHRITIS

DM Dimov, II Zhutev, RD Raichev, RN Vacheva. *Clinic of Rheumatology, Military Medical Academy, Sofia, Bulgaria*

10.1136/annrheumdis-2001.721

Background In the last decades the interest in the problems of poststreptococcal reactive arthritis/PSReA/growed up caused by the increased number of publications on it.

Objectives The aim of the work is to make comparison between acute rheumatic fever/ARF/and PSReA from the clinical and laboratory aspects.

Methods Object of the investigation were 9 men aged $19,0 \pm 1,0/18–21$ /fulfilled Jones criteria/1992/for ARF and 8 men and 2 woman aged $21,5 \pm 5,6/18–32$ /fulfilling criteria of the Canadian Paediatric Society/1995/for PSReA. The patients were investigated and treated clinically and followed up till 60–90 th day.

Results ARF developed more often after tonsillitis, PSReA – after catarrh of upper respiratory ways, the latent period being longer in ARF/ $20 \pm 4,5$ days/than in PSReA/ $11,8 \pm 16,7$ days/. The acute onset and fever were more characteristic of ARF than of PSReA. In ARF joint index was higher, joints were migratorily affected, the pain at rest was more violent, the leucocytes, ESR, AST-O and anti-DNase B showed higher values. In PSReA the joint affection was cumulative, the entezopathies – more frequent and some morning stiffness existed. Auscultative finding and ECG changes were established only in ARF. After treatment beginning the joint syndrome in ARF was over in few days whereas in PSReA it persisted within a month. Normalisation of the laboratory changes occurred more slowly again in PSReA.

Conclusion Despite of the same aetiology/antecedent streptococcal infection/the established clinical and laboratory features of

ARF and PSReA permit to consider them as separate nosological units.

SAT0219 INFECTIOUS OSTEITIS PUBIS. A REPORT OF 20 CASES

D Wendling, A Lohse, E Toussiro. *Rheumatology, University Hospital Minjoz, Besancon, France*

10.1136/annrheumdis-2001.722

Background Osteitis pubis covers several different entities and may lead to nosologic confusion. Infectious osteitis pubis (IOP) should be used when underlying infection is found.

Objectives To analyse the main characteristics of IOP in a mono-center series.

Methods Retrospective study about IOP with analysis of clinical, biological, imaging, bacteriological and pathological features. Inclusion criteria: osteitis pubis with favourable outcome under antibiotics.

Results Twenty cases were analysed; 13 men, 7 women; aged 16–77 years. IOP followed surgical procedure of the pelvis or urinary tract (8/20), was post-traumatic (2/20), regional infection related (3/20), or of unknown origin (7/20). Two cases of diabetes and one chronic steroid treatment were present. Pain was constant, with a delay in diagnosis of over 1 month. Elevated ESR (15/20), hyperleukocytosis (6/20), positive cultures of blood (3) or urine (4) were found. X-rays modifications were constant. Cultures of suppurative scars were positive in 4 cases, whereas cultures of pubis biopsies were positive in 1 out of 9 cases. Mononuclear subacute osteomyelitis was found histologically in 5/9 biopsies, without suppurative or necrotic changes. Outcome was favourable in all cases under antibiotics in a period of 1 to 12 months. Spine or sacro-iliac extension occurred in 3 cases.

Conclusion IOP should be considered as a septic arthritis to reduce the delay in diagnosis and in instauration of targeted antibiotherapy.

SAT0220 CLINICAL OUTCOME OF NON-TYPHOIDAL SALMONELLA SEPTIC ARTHRITIS AFTER LONG TERM ANTIBIOTIC TREATMENT

R Nanagara, S Suwannaroj, A Mahakkanukrauh, P Mootsikapun. *Medicine, KhonKaen University, Maung District, Thailand*

10.1136/annrheumdis-2001.723

Background The rising incidence of *Salmonella* septic arthritis in immunocompromised patients with serious complications, and high relapse rates, remains an unsolved clinical problem. Our previous IEM study suggested that quinolone compound antibiotics may enhance the intracellular killing function of the synovial mononuclear cells in those patients. This may help eradication of this organism from the joint at the early phase. However, the clinical outcome after long term antibiotic treatment has not been evaluated.

Objectives To evaluate the clinical outcome of *Salmonella* septic arthritis patients after long term antibiotic treatment.

Methods Clinical data of 13 patients with 19 episodes of culture proved group D or group B *Salmonella* septic arthritis were studied. Clinical outcomes after long term antibiotic treatment were only analysed in the patients who completed the treatment course and had at least 1 year follow up.

Results All 13 patients had underlying diseases, 12 had been treating with immunosuppressive drugs, except one case who had underlying OA. SLE was the most common underlying disease found in our study. Acute and chronic onset monoarthritis occurred in a similar numbers. Chronic long standing joint infection mostly occurred in the patients with partial response to the first line antibiotic treatment. Knee and hip joint were the common sites of infection. Arthroscopic drainage or arthrotomy was performed in all but one patient who was treated by repeated arthrocentesis of the knee joint. All patients received at least 2-week parenteral antibiotic. Three patients were excluded from antibiotic treatment evaluation because of lost follow up after being discharged from the hospital.

Clinical response at the early phase: In 16 events of *Salmonella* septic arthritis, 6 were treated with cotrimoxazole, 7 with quinolone compound and 3 with beta-lactam antibiotics. Dramatic clinical response was found only in the patients who were treated with cotrimoxazole or quinolone compound antibiotics. 2 out of 3 patients who were treated with beta lactam antibiotics partially responded to antibiotics given. After 8 weeks, these 2 patients were retreated with another course of cortimoxazole or quinolone compound.

Long term Clinical outcome: In all patients who were treated with 3 month course of quinolone compound, there was no relapse after 1–5 years follow up. Relapses were more common in cotrimoxazole treatment group (4 out of 6) and usually occurred within 4 months after antibiotic was stopped. Only one case was completely responded to beta-lactam antibiotic treatment without relapse. AVN was the most common complication found in *Salmonella* septic hip, and chronic osteomyelitis was found in a case with septic knee.

Conclusion We suggest to treat *Salmonella* septic arthritis in immunocompromised host with adequate drainage and 3 months of quinolone compound antibiotics. Alternative regimen is parenteral cotrimoxazole in an early phase followed by oral quinolone compound for totally 3 months. Long term treatment with cotrimoxazole frequently resulted in relapse.

SAT0221 DIAGNOSTIC VALUE OF SERUM AND SYNOVIAL PROCALCITONIN (PCT) IN BACTERIAL, CRYSTAL-ASSOCIATED AND RHEUMATOID ARTHRITIS

¹J Sibilia, ¹M Martinot, ²A Sarau, ²P Guggenbuhl, ²X Puechal, ²JF Maillefert, ²M Soubrier, ²G Coumaros, ¹F Liote, ¹FX Limbach. ¹Rheumatology, ²Groupe d'Etude Procalcitonine, CHU Hautepierre, Strasbourg, France

10.1136/annrheumdis-2001.724

Background Procalcitonin (PCT), the calcitonin peptide precursor, is a new specific marker of severe bacterial and fungal infections. PCT is not or slightly elevated in others inflammatory diseases. PCT measurements could help to differentiate bacterial arthritis to other forms of acute arthritis.

Objectives To determine the interest of serum and synovial PCT for the diagnosis of acute bacterial arthritis.

Methods

- A one year prospective study (RR study group): sera and synovial fluid from 32 adults with acute arthritis were immediately frozen (-20°C) before treatment. for all patients, the diagnosis was confirmed by specific synovial analysis.
- PCT (N < 0.5 mg) was measured by a specific and ultrasensitive immunoluminometric yesy (BRAHMS diagnostica, Berlin, Ger.)

Results

Abstract SAT0221 Table 1

	serum PCT ng/ ml	synovial PCT ng/ml	CRP mg/l	ESR mm/h
Bacterial arthritis (n = 10)	0.59 (<0.08–7.91)	0.22 (0–1.31)	37 (61–493)	80 (30–120)
Crystal arthritis (n = 11)	<0.08**(<0.08–0.69)	0.12 (NS) (0.08–0.88)	91*(4–355)	42 (NS) (3–98)
Rheumatoid arthritis (n = 11)	<0.08**(<0.08–0.61)	<0.08–0.6)	50.4** (3.2–90)	50 (NS) (9–130)

Results are expressed in median and range. Values are compared between septic group and crystal or rheumatoid group by Mann-Whitney test: **p < 0.01; *p < 0.05.

Conclusion

- These results show that plasma PCT levels are higher in patients with septic arthritis, but PCT sensitivity remains insufficient. However, in case of bacterial arthritis, PCT in association with CRP, could be of great interest for clinicians, as its increase is in favour of a bacterial origin.
- PCT is not present in all biological fluids. If synovial PCT does not seem to be helpful in clinical diagnosis, this study is, to our knowledge, the first to demonstrate PCT existence in synovial fluid.

SAT0222 TOTAL BODY AND REGIONAL BONE MINERAL AND SOFT-TISSUE COMPOSITION IN HIV DISEASE

¹J Bernard, ²E Bonnet, ²C Acquilina, ²R Hervé, ²P Massip, ¹B Mazières. ¹Department of Rheumatology, ²Department of Infectiology, University Hospital of Toulouse, Toulouse, France

10.1136/annrheumdis-2001.725

Background Osteopenia and adipose tissue maldistribution are two complications of highly active anti-retroviral therapy (HAART: 1 protease inhibitor + 2 nucleoside reverse transcriptase inhibitors). Dual energy x-rays absorptiometry (DEXA) is a reliable tool to assess total body and regional bone mineral and soft-tissue composition.

Objectives (1) To compare the results of DEXA in HIV-infected patients treated or not with HAART, with or without clinical lipodystrophy and (2) to evaluate DEXA as a tool for early diagnosis of body fat redistribution.

Methods A cross-sectional analysis was performed on 220 men. All subjects gave written informed consent. Controls (C): 106 healthy uninfected volunteers without medical or surgical history, nor immobilisation and therapies which may modify bone mineral density, mean age 38 years. One hundred and fourteen HIV-infected patients at steady-state, without opportunist disease, nor prophylactic drugs? use were divided in 3 groups: (i) 20 naive HIV-patients (N: mean age 38 years, disease duration 43 mths, viral load 3.7 log, CD4⁺ 417/mm³), (ii) 32 HIV-treated patients with no clinical lipodystrophy (n-CLD: mean age 35, disease duration 72 mths, HAART duration 15 mths, viral load 2.3 log, CD4⁺ 524/mm³), and (iii) 62 HIV-treated patients with clinical lipodystrophy (CLD: mean age 42, disease duration 94 mths, HAART duration 26 mths, viral load 1.8 log, CD4⁺ 483/mm³). Total body and regional soft-tissue composition were measured with DEXA (DPX-L, Lunar Corp. Acquisition and analysis software 4.6). The following parameters were studied: