AB0205 UNUSUAL AETIOLOGY OF ERYTHEMA NODOSUM, ARTHRITIS, AND PLEURAL EFFUSION

U Steiger, M Weber, H Gerber. *Department of Rheumatology and Rehabilitation, Triemli Hospital, CH – 8063 Zürich, Switzerland*

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Background Association of erythema nodosum with giardia lamblia infection is only known for a few adult cases in the literature.¹ Several case reports discuss reactive arthritis or sacroiliitis with giardiasis.² Allergies and other immunological features such as pleural eosinophilic effusion have occasionally been reported as well.

Objectives A 36-year-old male refugee from Sri Lanka was referred to our outpatient department for erythema nodosum and history of arthralgia of large and medium-size joints and low back pain not fully responsive to NSAID. He also had symptoms such as low grade fever, conjunctival injection, and headaches. He complained of a slight weight loss. Family history and system review was unremarkable except for intermittent chronic eye inflammation with itching, later classified as nodular episcleritis lesions. There were no gastrointestinal complaints.

Methods Clinical examination revealed erythema nodosum and pleural effusion, but no synovialitis.

Laboratory analysis showed mild inflammatory reaction with normal eosinophil count, no complement consumption nor significant auto-antibody titer. Serum IgE titer was high. Three-phase bone scintigraphy and x-ray of the sacroiliacal joints were normal. Chest x-ray showed a pleural effusion.

Because of life style and origin of the patient, we ordered a stool sample examination, which was full of giardia lamblia.

Results The prescribed metronidazole regimen was not taken for compliance problems.

Five months later he was again referred for erythema nodosum and arthritis with swelling of ankle, wrist, knee and MCP joints. Chest x-ray revealed pleural effusion as before. Stool samples again showed giardia infestation with unchanged laboratory analyses. After a five days course of metronidazole 250 mg t.i.d., joint symptoms diminished dramatically, and erythema nodosum vanished.

Conclusion Giardia lamblia infection typically presents with abdominal symptoms or malabsorption syndrome, some patients develop low grade fever and headaches. Hypersensitivity symptoms such as pleural effusion, reactive arthritis and erythema nodosum are very rarely reported. Diagnosis is confirmed by the good response of the joint symptoms to antiparasitic therapy.

The presented case of relapsing erythema nodosum and arthritis and pleural effusion documents for the first time in the literature the coincidence of these three rare complications of giardiasis.

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AB0206 INVESTIGATION OF THE INDUCIBILITY OF RETROVIRUSES FROM RHEUMATOID ARTHRITIS SYNOVIAL FIBROBLASTS (RA-SF) AND RA-SYNOVIAL FLUID CELLS (RA-SFC)

¹CA Seemayer, ²SA Kolb, ³J Böni, ¹M Neidhart, ⁴B Simmen, ¹RE Gay, ¹BA Michel, ³J Schüpbach, ¹S Gay. ¹Center Exp Rheum; ²Electron Microsc Pathol, University Hospital; ³Nat Swiss Center Retrov, University; ⁴Orth Surg, Schulthess Clin, Zürich, Switzerland

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Background

Objectives In many investigations virus like particles (VLP) and especially type-C retroviruses could be activated from tumour cells in culture after stimulation with DNA damaging agents. Co-culture with H9 cells, a lymphatic cell line, has been successfully used to isolate exogenous human retroviruses such as HTLV and HRV-5. The aim of this study was to induce potentially hidden retroviruses from cell cultures from RA patients and to analyse for VLP and reverse transcriptase (RT)-activity.

Methods Rheumatoid arthritis synovial fibroblasts (RA-SF) were derived from synovial biopsies and synovial fluid cells from RA synovial fluids. Normal skin fibroblasts served as controls for the RA-SF and SFC from arthritis urica as well as unclassified oligoarthritis for the RA-SFC. As positive control we used baby hamster kidney cells, murine mast cells and pig fibroblasts, which produce endogenous retroviruses. Subconfluent RA-SF and controls were incubated with azacytidin (AzaC: 2 µg/ml for 24 h), bromodeoxyuridine (BUDR: 25 µg/ml for 24 h) or irradiated with 2 or 8 Gy X-rays, respectively. Supernatants of cell cultures were taken after 24 h or 48 h and analysed for RT-activity by the product enhanced reverse transcriptase (PERT)-assay. The cells were harvested on days 2–6 without trypsinization, fixed in glutaraldehyde and prepared for electron microscopy. Furthermore, RA-SF and RA-SFC were co-cultured with H9 cells for more than 3 weeks, and the supernatant was collected every 3–4 days and analysed by the PERT-assay.

Results In the virus induction and co-culture experiments, no evidence for RT-activity could be detected. In contrast, the positive controls including supernatants of cell cultures from baby hamster kidney cells, murine mast cells and pig fibroblasts revealed a strong positive RT-activity. The electron microscopical investigation of the AzaC, BUDR treated or irradiated cells did not reveal VLP.

Conclusion The current investigation does not support the involvement of infectious retroviruses in RA, but cannot exclude a role of exogenous and/or endogenous retroviruses, or the involvement of endogenous retroviral elements in the pathogenesis of RA.

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OP0105 A COMPARISON OF POST STREPTOCOCCAL REACTIVE ARTHRITIS SUBGROUPS BASED ON ASO/ANTIDNASE-B RATIOS; A THREE YEAR INCEPTION COHORT STUDY

¹TL Jansen, ¹PM Houtman, ¹EN Griep, ¹GA Bruyn, ²AM Elsacker-Niele. ¹Rheumatology; ²Microbiology, Lab.vd. Volksgezondheid, Leeuwarden, Netherlands

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Background Last decade a resurgence of post streptococcal reactive arthritis (PSRA) is observed in the Netherlands. As throat cultures often remain negative, discrimination between cases due to group A streptococci (GAS) versus non-group A streptococci

(NGAS) may be strived for by using serologic responses in anti-strepto-lysin-O (ASO) and anti-deoxyribonuclease-B (antiDNase-B). Previous studies have shown: lower ASO/antiDNase-B ratio 1.45 for NGAS infection.

Objectives

Methods

Study design Prospective observational inception cohort study of consecutive PSRA patients, presenting to our Dept of Rheumatology from April 1998 until Dec 2000. Alternative causes of arthritis were excluded.

Results 20 female, 15 male PSRA patients were included; 1 male was excluded after half a year as he developed a RF positive erosive RA. The 24 remaining patients did not meet Jones' criteria. A sore throat was recalled by 19/24 = 79%. Throat culture was positive in 7/24 = 29%: GAS in 4, GGS in 2, and GCS in 1 patient. Patients were subgrouped according to ASO/antiDNase-B ratio. At least a 1-yr-period of monthly penicillin prophylaxis was advised to patients in whom GAS was the presumed causative microbe. So far follow-up was uneventful with respect to carditis/chorea: complication rate <1/427 mos. In 1 patient from the NGAS group, a fulminant arthritis with pneumonitis recurred 6 mos after a 2-yr-period of penicillin prophylaxis: arthritis recurrency rate 1/304 NGAS-patient mos.

Abstract OP0105 Table 1

	Table: means SEM, unless stated otherwise. (*p < 0.05 in Chi-square test)	Presumed NGAS
	Presumed GAS	
Female	8:5	12:9
Age (SD)	34(11)	37(19)
ESR	46(9)	39(8)
ASO	985(140)	1090(130)
ASO/antiDNase-B-ratio	0.40 (0.05)	12.2 (3.8)
Polyarthritis	38%	5%
Recovery	15%	29%
Recovery > 6 mos	31%	14%

Conclusion Serologic analysis in PSRA gives additive information. A higher ASO/anti-Dnase-B ratio suggests primary NGAS infection, is associated with a significantly less polyarticular presentation of arthritis, and with a significantly more rapid recovery. The exact role for penicillin prophylaxis warrants further investigation.

OP0107 HUMAN PARVOVIRUS B19 INFECTION ASSOCIATED ARTHRITIS: CLINICAL FINDINGS

JA Román-Ivorra, C Fernández-Carballido, JJ Alegre-Sancho, C Martínez, L Abad. *Rheumatology, Hospital Universitario Dr. Peset, Valencia, Spain*

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Background

Objectives Description of clinical findings and evolution in a cohort of patients with recent human parvovirus B19(PB19) infection and arthritis.

Methods 26 patients with arthritis and recent PB19 infection (high titers of anti-PB19 Ig M antibodies) were studied. Clinical (prodromal symptoms, arthritis pattern, extra-articular features

and evolution) and analytical (blood count, Erythrocyte sedimentation rate, C-reactive protein, antinuclear antibodies, anti-DNA antibodies, anti-cardiolipin antibodies, C3/C4 levels and urine abnormalities) data were collected. SLE(ACR,1982), RA (ARA,1987), and Fibromyalgia (Wolfe,1995) criteria were reviewed in each case.

Results Mean age of the 26 patients (23 female, 3 male) was 38.6 years. Three patients (11.5%) fulfilled ≥ 4 ACR criteria for SLE, and four patients (15.4%) had an SLE-like syndrome. Joint symptoms always manifested as an abrupt-onset arthritis; mainly as a polyarthritis (92.3%) with an additive (76.9%), symmetric (84.6%) pattern. Most of the patients became symptom-free in a period not longer than less than six months (< 8 weeks: 76.9%; 8–24 weeks: 7.6%), and only 4 patients had a chronic course (SLE-like:2 patients; SLE: 1 patient; fibromyalgia: 1 patient).

Abstract OP0107 Table 1

	SLE	SLE-like
Photosensitivity	2	0
Lymphopenia/anaemia	3	4
Antinuclear antibodies (ANA)	2	2
Pleural effusion	1	0
Anti-cardiolipin antibodies	2	2
Chronicity	1	2

Conclusion Most of the patients with a recent PB19 infection show a self-limited symmetric additive polyarthritis. Some of this patients may fulfil SLE, SLE-like or fibromyalgia criteria. This virus could act as a trigger in the etiopathogenesis of this diseases.

SAT0217 EXPERIMENTAL ARTHRITIS IN LEWIS RATS INDUCED BY REPEATED INJECTIONS OF YERSINIA ENTEROCOLITICA O:8 IN DIFFERENT DOSES

E Bernotiene, R Bradunaite, L Leonaviciene, V Astrauskas, A Venalis, D Vaitkiene, A Valickas. *Laboratory of Experimental Pathology, Institute of Experimental and Clinical Medicine, Vilnius, Lithuania*

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Background The incidence of experimental arthritis induced by *Yersinia enterocolitica* O:8 (YeO8) in animals of different species and strains varies greatly, depending on the the susceptibility of the strain and the dose.^{1,2} The susceptibility is easily affected by many factors. To increase the incidence of arthritis we used repeated injections of YeO8.

Objectives To evaluate the ability to cause reactive arthritis (ReA) in Lewis rats by repeated i.v. injections of various doses of live YeO8.

Methods 3 experiments were performed on 30 male Lewis rats. Bacterial culture of virulent YeO8 for each experiment were prepared according to usual methods and injected into the tail veins of rats in doses 4×10^7 ? 6×10^9 . The limbs of animals were examined 5 times/week, the severity of joint swelling was assessed by score from 0 to 4. At the end of experiment rats were decapitated and pathomorphological examination of joints and YeO8 detection in the internal organs were performed.

Results In the first experiment 10 male rats were i.v. injected with YeO8 in a dose 4×10^7 , but no signs of ReA were