Sonography as a replacement for sialography for the diagnosis of salivary glands affected by Sjögren’s syndrome

Recently, it has been suggested that sono-
graphic evaluation of the salivary glands is
useful in the diagnosis of Sjögren’s syndrome.
Kawamura et al and, more recently, Aji et al,
showed that descriptive and quantitative
assessment of the salivary glands by sonogra-
phy efficiently differentiated between dis-
 eased and normal glands in patients with Sjö-
gren’s syndrome.1,2 They showed that the
proposed sono graphic gradings correlated
well with the sialographic gradings. These
findings suggest that sonography might be an
alternative diagnostic tool for Sjögren’s syn-
drome.

Here, we attempted to determine whether
sonography can take the place of sialogra-
phy as an alternative technique for the assessment
of salivary gland involvement in Sjögren’s
syndrome. Sialography and sonography were
performed on 294 patients who presented
with sicca syndrome (171 positive and 123
negative for Sjögren’s syndrome). We diag-
nosed patients with Sjögren’s syndrome on
the basis of the criteria of the European Com-


Table 1

<table>
<thead>
<tr>
<th>Performance and logistic regression analysis of diagnostic criteria for Sjögren’s syndrome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sialography</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Sensitivity (%)</td>
</tr>
<tr>
<td>Specificity (%)</td>
</tr>
<tr>
<td>Accuracy (%)</td>
</tr>
<tr>
<td><strong>Univariate analysis</strong></td>
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<td></td>
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<tr>
<td></td>
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<tr>
<td><strong>Multivariate analysis</strong></td>
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</tbody>
</table>
 NS, not significant.
Radiographs of the hands and feet were normal. There were slight erosions of the sacroiliac joints and of the symphysis pubis.

The patient was treated with non-steroidal anti-inflammatory drugs (NSAIDs) and on several occasions with local injections of corticosteroids into the knee joints. For the psoriatic nails he took acitretine (Neotigason) at a daily dose of 20 mg, for 12 months, but the nail lesions did not improve. In view of the persisting arthritis, it has been treated since January 2000 with sulfasalazine (the dose being progressively increased from 0.5 g daily to 2 g daily), in addition to NSAIDs. Three months later, the nail lesions started to recede and they disappeared progressively (fig 1B); the improvement has persisted until now. Concomitantly, there was a marked improvement of the arthritis.

Discussion

Nail disease is significantly associated with PsA. It is particularly common in cases with DIP joint involvement and tends to involve more severe PsA. In view of the close chronological relationship between the administration of sulfasalazine and the improvement of the nail lesions, it can be considered that sulfasalazine played a beneficial role in the pathophysiologic condition of our patient. Dermatological assessment of patients treated with sulfasalazine for PsA has been reported in two series; according to the report published in the series of Farr et al patients treated with sulfasalazine for PsA showed signs of cutaneous improvement compared with those receiving placebo. The series of Farr et al reports improved cutaneous lesions in as few as 3/15 patients treated with sulfasalazine and 1/15 patients receiving placebo. However, we could not find any indication of the evolution of possible simultaneous psoriatic nail lesions.

Treatment of PsA with cyclosporin or etanercept is effective for both joint and skin lesions of psoriasis; again no data about the outcome of psoriatic nail lesions were provided in these clinical studies. Our case report might be the occasion to draw the attention of rheumatologists to the possible beneficial effects of basic treatment such as sulfasalazine not only for PsA but also for treating psoriatic nails.

Nail lesions in psoriatic arthritis: recovery with sulfasalazine treatment

Treatment with sulfasalazine has been reported to be effective in psoriatic arthritis (PsA). However, the role of sulfasalazine in cutaneous lesions has been surrounded by controversies. As far as we know its possible beneficial effect on nail lesions has not been reported.

Case report

A 25 year old man had presented with nail lesions considered to be psoriatic since 1996. During the same period he started to have pain in both knee joints. Since 1998 he had also had pain in the distal interphalangeal (DIP) joints. At the end of the same year the patient consulted a rheumatologist. On clinical examination, both knee joints were swollen and a Baker's cyst was present at the right side. The 4th and 5th DIP joints of both hands were red, painful, and slightly swollen. Nail deformities were present in both hands (fig 1A) and feet. Psoriatic lesions of the auditory canals and intergluteal fold were seen, prompting the diagnosis of psoriasis partim inversa.

Synovial fluid from the right knee joint contained 17.8 x 10^6 leucocytes (86% polymorphonuclear); no crystals were seen. The erythrocyte sedimentation rate was 33 mm/1st h. Rheumatoid factor was negative, as were cultures of nail specimens for fungi.
muscular deficit, etc.), which explains the difference between the two evaluations. Cases where the IV immunoglobulin resulted in a reduced use of corticosteroids, or cases where IV immunoglobulins made it possible to avoid using immunosuppressive drugs were regarded as a success by the senior doctor, whereas patients did not necessarily have the same impression.

The 23 patients (77%) who said they had benefited from the IV immunoglobulin treatments at home gave the following reasons: better comfort (n=12), presence of next of kin (n=10), more occupation (n=6), time gain (n=5), better mood (n=3), maintaining activities (n=3), avoiding repeated trips to the hospital (n=3), better quality of sleep (n=2), better food (n=2). The seven patients (23%) who preferred the treatments at the hospital gave the following reasons: better monitoring, less trouble (IV immunoglobulin collected at the hospital pharmacy, calling the nurse at home), giving the following reasons: better food (n=2). The seven patients (23%) who preferred the treatments at the hospital gave the following reasons: better monitoring, less trouble (IV immunoglobulin collected at the hospital pharmacy, calling the nurse at home),

The mean cost of a treatment in hospital was $2701 against $2471 for a treatment at home.

E Hachulla, A Wibaux, P-Y Hatron, U Michon-Pasturel, V Queyrel, A-L Fauchais, B Devulder
Internal Medicine Department, Hôpital Claude Huriez, University of Lille, 59037 Lille cedex, France
M-N Lefebvre, M Yilmaz
Central Pharmacy, University of Lille

References

Elastofibroma dorsi
Elastofibroma is a rarely diagnosed benign fibrolipoproliferative lesion which occurs most commonly in the periscapular region of middle aged to elderly women. Recognition of the lesion is important as the differential diagnosis includes other benign and also

Table 1 Evaluation of the cost of at home IV immunoglobulin treatments (n=277) and comparison with the theoretical cost in hospital

<table>
<thead>
<tr>
<th>IV immunoglobulin</th>
<th>24 h hospital stay with hospital lump sum</th>
<th>Small equipment</th>
<th>Nursing</th>
<th>Total cost for 277 treatments</th>
<th>Savings achieved for 277 treatments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical cost in hospital</td>
<td>$2055  (deduction on drug budget)</td>
<td>$605  (deduction on small equipment budget)</td>
<td>$41</td>
<td>$748274</td>
<td>$580556  (representing the virtual economy made by the hospital department (drug budget + small equipment))</td>
</tr>
<tr>
<td>Cost for one treatment in hospital</td>
<td>$2701</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective cost at home</td>
<td>$2363  (15% of retrocession overcost*)</td>
<td>0</td>
<td>$41</td>
<td>$67</td>
<td>$684588</td>
</tr>
<tr>
<td>Cost for one treatment at home</td>
<td>$2471</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*In France when a drug is retroceded by a hospital pharmacy, it is invoiced 15% higher, the difference being paid to the hospital administration to cover the management and traceability costs.

Table 2 Home IV immunoglobulin infusion guidelines for patients with autoimmune disease

1. Need for a defined diagnosis
2. Presence of rational physiopathological basis that could “legitimise” the use of IV immunoglobulin
3. Senior hospital prescription
4. Respect of the contraindication of home IV immunoglobulin programme: coronaryopathy, insufficiency or ischaemic cardiopathy, recent stroke, nephropathy, uncontrolled hypertension, thrombosis of the perfused vein, hypersensitivity reaction after the first or second hospital infusion
5. More than one hospital based infusion before infusion at home to assess the tolerance
6. Average flow rate of IV immunoglobulin no quicker than 10 g per two hours
7. Collaboration with a home care organisation for visiting nurses and for collection of tubing and used bottles
A 32 year old man with a one month history of pain in the right shoulder over the scapula, which was worse on movement of the arm, had no wasting or neurological signs. Pain was described as a dull ache of the shoulder when the arm is moved, while fewer than 10% present with a painless swelling; approximately 50% of subjects are asymptomatic and may present with soft tissue density in the periscapular region when the scapula is raised. Clinical examination showed a hump on the posterior aspect of the shoulder over the scapula, which would appear and disappear with movement of the arm. The patient had no other medical history or relevant family history.

On examination there was a full range of movement of both shoulders and neck with no wasting or neurological signs. Pain was reproduced around the right shoulder when the arm was circumducted. In this position a firm, poorly circumscribed, and mobile mass of 5 cm was apparent, overlying the inferior angle of the scapula. The rest of the examination was normal.

Initial investigations showed a normal full blood count, bone profile, and inflammatory markers, and a normal radiograph of the right shoulder and scapula. Subsequent magnetic resonance imaging (MRI) showed a poorly circumscribed heterogeneous soft tissue mass between the chest wall and the scapula (Fig 1). The size of the lesion was 5.5 cm at its largest dimension. It was not possible to determine if the lesion was arising from the scapula or from the subcutaneous tissues. The lesion had heterogeneous signal intensity on T1 weighted images. The lesion was hyperintense on T2 weighted images, with heterogeneous signal intensity on T1 weighted images after intravenous administration of gadolinium. The lesion was relatively well defined on the surrounding soft tissues, although it was not possible to determine if it was arising from the scapula or from the subcutaneous tissues.

The differential diagnosis was elastofibroma. Surgical excision was performed because the mass was causing pain. Postoperative histology confirmed an elastofibroma. The patient has remained asymptomatic after surgery with no recurrence of the mass. Elastofibroma, first described in 1961,1 is a benign, slow growing, mesenchymal soft tissue tumour.2 They usually occur in active subjects above the age of 50 with a male:female ratio of 1:5.3 Most (99%) occur in the subscapular region, usually on the right side. The lesions have occasionally been found in the extremities, head, abdominal and thoracic cavities.4 Of those in the subscapular region approximately 10% are bilateral.5 The cause and pathogenesis are unclear, but it is suspected that subclinical microtrauma may lead to reactive hyperplasia of elastic fibres with consequently increased production of fibrous tissue.6 Clinically, over 50% of subjects are asymptomatic and may present with a painless swelling; approximately 25% present with a clicking sensation when the arm is moved, while fewer than 10% present with pain.8

Plain radiographs may be normal or may show soft tissue density in the periscapular region when the scapula is raised.9 Computed tomography usually shows a heterogeneous soft tissue mass with poorly defined margins.10 MRI is the best non-invasive technique and most useful for diagnosis. Elastofibromas appear as poorly circumscribed soft tissue lesions with similar signal intensity to that of skeletal muscle but interspersed with high signal intensity areas representing adipose strands.11 The differential diagnosis includes desmoid tumours, neurofibroma, and liposarcoma. However, these tumours usually show strong enhancement after gadolinium injection. Usually faint enhancement is seen with elastofibromas, although marked enhancement, mimicking malignant tumour, has been occasionally reported.12 Biopsy should therefore be undertaken as the confirmatory procedure and to exclude sarcoma. In cases where the patient is asymptomatic, excision is unnecessary. Malignant transformation is unknown. In symptomatic cases local excision is the best treatment.13 Recurrence has not been reported.

We conclude that elastofibroma should be considered in the differential diagnosis of subscapular pain. Although an uncommon lesion with a variable clinical presentation, the site and MRI appearances are characteristic. Awareness of the benign nature avoids unnecessary surgery and reassures a symptomatic patient.

References
an unremarkable past medical history, which did not include any toxic habits or recent trauma. Bursal aspiration showed that the synovial fluid had inflammatory characteristics (leucocyte count 4.9×10⁶ cells/l (54% neutrophils), and a glucose level of 3.8 mmol/l), but there were no crystals and a fluid culture was negative. A diagnosis of olecranon bursitis was established, and conservative management (steroid injection) was decided on. Bursa effusion was repeated over the next four days, so a further aspiration was carried out and local injection with triamcinolone acetate (20 mg) was given. However 24 days later the pain worsened and swelling of the elbow recurred; in view of hydropneumohematic contamination, a fluid culture was identified as positive for *C parapsilosis*.

After a thorough review of the Medline database (from 1966 to January 2001) using medical subject headings, and keyword searches that included "septic bursitis" and "Candida," we found only a few reports. Two caused by *C albicans*, two by *C tropicalis*, and another one by *C lusitaniae* (table 1). Characteristically, in all the cases, and in the present report, different risk factors or underlying diseases were found. Four cases were caused by haematogenous spread and two induced by direct penetration, including our case. The olecranon bursa was affected in three cases, including the present report.

### Table 1: Main clinical features of candida bursitis

<table>
<thead>
<tr>
<th>Case</th>
<th>Age/sex</th>
<th>Candida strains</th>
<th>Localisation</th>
<th>Underlying disease</th>
<th>Probable source</th>
<th>Treatment</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>C albicans</td>
<td>Subacromial</td>
<td>SLE/stereoids</td>
<td>Candidaemia</td>
<td>AMB</td>
<td>Cure</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>C tropicalis</td>
<td>Olecranon</td>
<td>Bladder carcinoma</td>
<td>Candidaemia</td>
<td>AMB + surgery</td>
<td>Cure</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>C tropicalis</td>
<td>Popliteal</td>
<td>Lymphoma/steroids</td>
<td>Candidaemia</td>
<td>AMB</td>
<td>Cure</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>C albicans</td>
<td>Popliteal</td>
<td>Alcoholism/steroids</td>
<td>Candidaemia</td>
<td>AMB, ketoconazole</td>
<td>Cure</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
<td>C lusitaniae</td>
<td>Olecranon</td>
<td>diabetes, asthma/steroids</td>
<td>Candidaemia</td>
<td>Fluconazole, 5-FC</td>
<td>Failure</td>
</tr>
<tr>
<td>6</td>
<td>CR</td>
<td>C parapsilosis</td>
<td>Olecranon</td>
<td>None</td>
<td>Steroid injection</td>
<td>Fluconazole + bursectomy</td>
<td>Cure</td>
</tr>
</tbody>
</table>

CR, current report; AMB, amphotericin B; SLE, systemic lupus erythematosus; 5-FC, 5-fluorocytosine.

On 1 August clinical symptoms persisted. Physical examination showed an increase in the size of the olecranon bursa. The patient had never presented with fever, arthralgias, or any general complaints. Laboratory studies, including a test for antibodies to HIV, were normal or negative. Magnetic resonance imaging was performed showing multiseptate bursitis; the adjacent structures were normal.

A removal of 10 ml bursa fluid again yielded a few colonies of *C parapsilosis*.

On 11 August users, systemic dissemination in intravenous drug addicts: report of three cases and review of the literature. Sem Arthritis Rheum 1995; 24:391–40.1. Characteristically, in all the cases, and in the present report, different risk factors or underlying diseases were found. Four cases were caused by haematogenous spread and two induced by direct penetration, including our case. The olecranon bursa was affected in three cases, including the present report.

*C parapsilosis* is a well known cause of arthritis that has been described secondary to systemic dissemination in intravenous drug users, and also by direct inoculation secondary to catheterisations or intra-articular injections. It is not strongly associated with immunocompromised hosts, but rather with invasive procedures or prosthetic devices. More recently *C parapsilosis* has emerged as an important nosocomial pathogen. This is the *Candida* species that is most commonly isolated from the hands of healthcare workers.

In contrast with other *Candida* species, colonisation with *C parapsilosis* rarely occurs before the onset of invasive infection, suggesting an exogenous source of infection.

### References

Prevalence of allergic respiratory diseases in patients with RA

The balance between Th1 and Th2 cell activity is considered crucial in many autoimmune disorders.1 It has been suggested that rheumatoid arthritis (RA) is a Th1 cell predominated, whereas atopic diseases are Th2 cell directed. Some recent observations1 of a decreased prevalence of atopy in patients with RA have received a lot of attention. It has been suggested that a Th2 cell related disorder such as atopy might have a protective role against the onset of a Th1 mediated disease such as RA,2 and the biological importance of the Th1/Th2 paradigm has been emphasised.

We evaluated the prevalence of atopic respiratory diseases in 126 consecutively observed adult patients in one series.3 The diagnosis was based on a suggestive clinical picture associated with the positivity of skin prick tests. Seven of 21 patients also had symptoms of asthma and 3/21 had undergone specific immunotherapy before the onset of RA symptoms. In 20/21 patients allergic respiratory symptoms had started before the onset of RA symptoms. In 5/21 patients atopic symptoms had totally disappeared at the time of this study.

Patients with RA with associated atopic disease did not differ from other patients with RA in the following characteristics: (a) sex (76.2% female v 75.2%); (b) positivity of rheumatoid factor (71.4% v 63.8%); (c) presence of subcutaneous noduli and/or other extra-articular manifestations (14.3% v 21.9%); (d) functional class according to the ACR revised criteria (class I-I1: 64% v 60%); (e) current treatment with two or more disease modifying antirheumatic drugs in combination (57.1% v 60.9%); (f) current steroid treatment (57.1% v 54.3%). Notably, most patients from both groups (90.9% v 76.8%) were taking steroids at a low dose—namely, not more than 5 mg daily of prednisone, when they were evaluated for this study.

Patients with atopic diseases were younger (mean age 53.8 v 57.5) and had a shorter average duration of RA (4.5 v 9.7 years) than those without.

The difference between the data and other reported observations is due to the methods used to determine the presence of atopic diseases. Those other studies started from the administration of standardised questionnaires to patients with RA and this method might have caused an underestimation of atopic symptoms. Conversely, prolonged steroid treatment, as well as the systemic symptoms and disability associated with RA, may often cause occult symptoms of rhinitis and asthma that only emerge at deeper analysis.

In conclusion, our data question the hypothesis of a mutual antagonism of RA and atopy, suggesting caution in interpreting previous data and confirming that things are often not as simple as they can seem at first glance.

G Provenzano, G Donato
Azienda Ospedaliera “Villa Sofia – CTO”, Divisione di Malattie dell’Apparato Toracico, Palermo, Italy

G Broi, F Rinaldi
Azienda Ospedaliera “V. Cervello”, Divisione di Medicina II, Palermo, Italy

Correspondence to: Dr G Provenzano, Via Massimo d’Azeglio No 2, 90143 Palermo, Italy; giuseppe.provenzano@tin.it

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10 Schafer T, King J. Epidemiology of allergic diseases. Allergy 1997;52(suppl 3B):14-22.

Henoch-Schönlein purpura: a possible complication of hepatitis C related liver cirrhosis

Henoch-Schönlein purpura (HSP) is a systemic small vessel vasculitis predominantly affecting children and, less commonly, adults. Classical HSP includes a tetrad of palpable purpura, arthritis, abdominal pain, and glomerulonephritis. Adults may present with any two of the four criteria in the tetrad (87% sensitivity and specificity). Gastrointestinal disease has been recorded in up to 82% of adult patients in one series4 and is usually self limiting with colicky abdominal pain, but may progress to ischaemic bowel perforation.5

We present the case of a 63 year old man with IgA vasculitis, probably HSP confounded by undiagnosed hepatitis C related liver cirrhosis. He was admitted with a two week history of dyspepsia, malaise, cough, fevers, and chills, myalgias, one day of a non-bloody erythematous rash on his legs, and an ileus. His hepatitis C antibody was positive; table 1 shows the results of other laboratory studies.

Cultures of cerebrospinal fluid, blood, and urine were negative. A colonooscopy was non-diagnostic.

Leucocytoclastic vasculitis was confirmed by skin biopsy, and direct immunofluorescence staining was positive for IgA deposits consistent with HSP (fig 1).

Treatment with high dose (1 mg/kg/day) intravenous corticosteroids was started. A second CT scan showed massive ascites, a partial superior mesenteric vein thrombosis, thickening, and focal and nodular irregularities throughout the small bowel (probable ischaemia), and pneumoperitoneum. Blood cultures disclosed septicaemia with *Bacteroides fragilis*. His clinical course rapidly deteriorated and he died on day 8.

There are two previous case reports of the association between HSP and hepatitis C.5,6 The diagnosis of HSP in this patient was most likely, given palpable purpura, haematuria, abdominal pain, and a skin biopsy demonstrating IgA complexes (fig 1). However, the possibility of hepatitis C associated IgA/IgM mixed cryoglobulinemia cannot be ruled out despite a negative cryoglobulin screen on two occasions. In this patient an IgA mediated vasculitis may have been the nidus for thombus formation and abdominal catastrophe.

The role of liver cirrhosis in the development of HSP is intriguing. Patients with cirrhosis may develop HSP as a consequence of defective liver metabolism of IgA circulating immune complexes (CICs), resulting in tissue deposition, although this is known to occur without overt vasculitis.8,9 Adult and paediatric HSP differ in the incidence and severity of renal involvement, with nephropathy and progression to renal insufficiency being greater in adult HSP which is associated with a poor outcome.8 Gastrointestinal manifestations vary widely and include abdominal pain, nausea/vomiting, intestinal haemorrhage and, rarely, perforation.7

There have been no large clinical trials in adults with complicated HSP. Corticosteroids used in a series of children have been shown to relieve symptoms,5 but fail to deal prospectively with the prevention of colicky abdominal pain complications. Adults respond favourably to corticosteroids and may be managed with short courses of treatment,5 but corticosteroids may also mask severe abdominal catastrophe.

Several important points can be learnt from this case report:

- Although nephritis is the most important long term prognostic factor in HSP in the short term, gastrointestinal disease can lead to death despite early therapeutic intervention.
- Liver cirrhosis secondary to hepatitis C may precipitate development of HSP or mixed cryoglobulinaemic vasculitis through the defective metabolism of CICs.
- Given the increasing incidence of hepatitis C related liver disease world wide, the association of these diagnostic and clinical implications should be considered more often.

Acknowledgements

We thank Drs Karen Stout, Brett Sheppard, Amy Howard, and Sandhya Venugopal for their participation in, and discussions about, this case.
Table 1  Significant laboratory values on the day of admission

<table>
<thead>
<tr>
<th>Study</th>
<th>Patient’s values</th>
<th>Normal values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemoglobin (g/l)</td>
<td>114</td>
<td>135–175</td>
</tr>
<tr>
<td>White blood cell count (&lt;10^3/l)</td>
<td>14000</td>
<td>3.4–10</td>
</tr>
<tr>
<td>Platelet count (&lt;10^3/l)</td>
<td>130</td>
<td>0.15–420</td>
</tr>
<tr>
<td>Complement C3 (mg/l)</td>
<td>400</td>
<td>880–2030</td>
</tr>
<tr>
<td>Complement C4 (mg/l)</td>
<td>&lt;100</td>
<td>160–470</td>
</tr>
<tr>
<td>Serum creatinine (µmol/l)</td>
<td>88</td>
<td>70–110</td>
</tr>
<tr>
<td>Alkaline phosphate (µmol/l)</td>
<td>99</td>
<td>35–105</td>
</tr>
<tr>
<td>Aspartate aminotransferase (µmol/l)</td>
<td>40</td>
<td>11–32</td>
</tr>
<tr>
<td>Alanine aminotransferase (µmol/l)</td>
<td>39</td>
<td>5–30</td>
</tr>
<tr>
<td>Lactate dehydrogenase (µmol/l)</td>
<td>176</td>
<td>110–205</td>
</tr>
<tr>
<td>Total bilirubin (µmol/l)</td>
<td>38</td>
<td>4–20</td>
</tr>
<tr>
<td>Albumin (g/l)</td>
<td>15</td>
<td>36–52</td>
</tr>
<tr>
<td>Urine analysis (RBC/HPF)</td>
<td>20</td>
<td>0–3</td>
</tr>
<tr>
<td>ANA titre</td>
<td>1/40</td>
<td>&lt;1/40</td>
</tr>
</tbody>
</table>

RBC/HPF, red blood cells/high power field; ANA, antinuclear antibody.

Severe aortic regurgitation in RF positive polyarticular JIA

An 18 year old girl of Moroccan origin with a clear medical history was transferred to the Netherlands in February 1989 because of a two year history of untreated polyarthritis. The disease had pursued a rapidly destructive course, resulting in contractures and ankylosis of hips, knees, shoulders, and elbows and small joint deformation. A diagnosis of juvenile idiopathic arthritis (JIA) polyarticular type, functional class IV was made. No nodules were present. Laboratory analysis at that time showed borderline positive serum rheumatoid factor (RF) 30 IE/ml. Tests for antinuclear antibodies and HLA-B27 were negative. Treatment was started with intensive physiotherapy and intramuscular gold, the latter being replaced by sulfasalazine because of proteinuria. In 1990 she was treated for a unilateral uveitis. In 1992 her right elbow was replaced. Until 1993 cardiac examination showed no murmurs and chest roentgenogram was normal.

In November 1995 she was admitted because of a six month history of progressive respiratory distress and increasingly frequent attacks of angina pectoris. Her heart rate was 84 beats/min with a blood pressure of 160/0 mm Hg. A grade 3/6 systolic ejection murmur that radiated into the ascending aorta was heard over the cardiac apex as well as a grade 3/6 left diastolic decrescendo murmur over the left sternal border. A pericardial friction rub was not present. Examination of the carotid arteries disclosed a murmur and palpable thrill on both sides. An electrocardiogram showed left ventricular hypertrophy and the chest radiograph slight cardiomegaly. An echocardiogram demonstrated left ventricular dilation (65 mm; normally <55 mm) and an abnormally thickened aortic valve. Colour Doppler echocardiography showed severe aortic regurgitation, a pressure gradient over the aortic valve (maximum pressure gradient 38 mm Hg, mean gradient 24 mm Hg), and diastolic back flow in the abdominal aorta. The diagnosis aortic valve insufficiency and secondary angina pectoris was made.

She underwent surgical replacement of her aortic valve with a Medtronic Hall prosthetic valve No. 21. The postoperative course was uneventful. Pathological evaluation of the excised strongly thickened and fibrotic tri-leaflet aortic valve was performed.

Microscopic findings in one of the rheumatoid leaflets showed tissue with lymphoplasmocellular infiltration and some polymorphonuclear cells around two areas of fibrinoid necrosis surrounded by a palisade of histiocytes (figs 1 and 2). These findings are similar to the description of a developed typical rheumatoid nodule.

At follow up after four years the aortic valve prosthesis still functions well and the patient has no cardiac signs and symptoms.

To our knowledge, this case is the first illustrated report of typical rheumatoid nodules found in an aortic valve removed owing to aortic valve insufficiency in a patient with polyarticular JIA. Our patient never had any nodules on other locations. Valvular disease is rare in patients with JIA and consists of valvulitis with a substrate with non-specific
changes of fibrosis and necrosis. Valvular involvement has been described in patients with all types of JIA, with the aortic valve being most commonly affected. Valvular disease is associated with severe destructive articular disease.

Furthermore, our case report confirms the possibility of successful mechanical aortic valve replacement in a case of severe progressive aortic valve insufficiency and secondary angina pectoris in a patient with polyarticular JIA.

We recommend regular cardiac appraisal as part of the routine assessment of every patient with JIA. Whenever cardiac murmurs are detected in these patients, echocardiographic assessment should be considered because if there is valve insufficiency the cardiac function may deteriorate and cardiac surgery may be needed.

Acknowledgments

We are grateful to Dr J van der Meulen, cardiothoracic surgeon, for the surgical description and to Dr AC van der Wal, pathologist, for his pathology specimen evaluation. We thank Dr FM Westerweel, rheumatologist, for allowing us to report on her patient.

I M Bultink, W F Lems, B A C Dijkmans, R M van Soesbergen
Department of Rheumatology, Slotervaart Hospital, Amsterdam, The Netherlands

J Lindeman
Department of Pathology, Slotervaart Hospital, Amsterdam, The Netherlands

Correspondence to: I M Bultink, Department of Rheumatology, Slotervaart Hospital, Louwesweg 6 1066 EC, Amsterdam, The Netherlands; iem_bultink@hotmail.com

References


Remission of Behçet’s syndrome with TNFα blocking treatment

Goossens et al reported on a patient in whom a remission of Behçet’s syndrome was induced with tumour necrosis factor (TNF) blocking treatment. We would like to add our experience in a patient with Behçet’s disease associated with rheumatoid arthritis (RA), treated with infliximab (Remicade).

A 47 year old male patient, born in Morocco, living in Israel, was diagnosed 14 years ago with polyarthritis, tenosynovitis of hands, feet, and knees. Radiography showed articular bone erosions; rheumatoid factor was positive, with a high erythrocyte sedimentation rate and C reactive protein. In parallel, the patient reported recurrent buccal and genital ulcers two to three times a month with papulopustular skin lesions on the feet. HLA-B5 (51) was positive. There was no eye involvement. A diagnosis of Behçet’s disease associated with erosive, seropositive RA was suggested. The patient was treated with sulphasalazine and colchicine without improvement; steroid treatment with azathioprine was added. The disease worsened: poorly controlled ulcers, progressive erosions in hands, knees, and feet. Later, pulse steroids, methotrexate, azathioprine, and cyclosporin were added serially, either singly or in combination.

In subsequent years he became dependent on steroids and never achieved complete remission. In December 2000 the patient was admitted to hospital with severe active polyarthritis, flexion contractures of the elbows, and an especially swollen left knee with Baker’s cyst and severe erosive disease. The patient additionally had buccal and penile ulcers. Because of the lack of response to conventional treatment we decided to treat him with infliximab (Remicade; Schering), a chimeric IgG monoclonal antibody directed against TNF. He received 300 mg intravenously (3 mg/kg) at intervals of two weeks, six weeks, and then every eight weeks. Two weeks after the first infusion the ulcers of mouth, penis, and other skin lesions were already considerably smaller and later disappeared. The polyarthritis improved considerably, except for the left knee, which required total replacement. Infliximab was given with continued colchicine and azathioprine. Our case, as in Goossens’ report, suggests that infliximab may have a beneficial therapeutic effect in microceral and cutaneous lesions as well as the presenting symptoms (girdle bilateral and symmetrical stiffness and pain) accompanied by systemic features (fatigue, weight loss, raised ESR) and the marked improvement after prednisone confirm the diagnosis of polyarticular rheumatism.

As far as we know this is the first report of pericardial tamponade requiring pericardial drainage in this disease.

A Brucato, G Brambilla
Divisione Medica “Brena”, Ospedale Niguarda Ca’ Granda, Milan, Italy

Correspondence to: Dr G Brambilla, Divisione Medica “Brena”, Via Mamei 46, 20129, Milan, Italy; brambil@tiscalinet.it

References


Figure 2. Detail of an area of fibrinoid necrosis surrounded by a palisade of histiocytes; infiltration predominantly with lymphocytes and plasma cells (haematoxylin and eosin). Bar represents 25 μm.
synovitis in Behçet's disease, in our case in association with RA.

Controlled studies will be needed to assess adequately the full effect of TNF antagonists in Behçet's disease.

M Rozenbaum, I Rosner, E Portnoy
Department of Rheumatology, Bnai Zion Medical Centre, Technion Faculty of Medicine, Haifa, Israel

Correspondence to: Dr Rosner; rosnerr@tx.technion.ac.il


Fatigue and immune activity in Sjögren's syndrome

Despite major desiccation of mucous membranes in Sjögren's syndrome (SS), fatigue is often experienced by patients as the most disabling complaint.1 Unfortunately, there is no proper treatment available to combat the fatigue in SS. Beside a variety of somatic and non-somatic conditions,2,3 increased immune activity has been implicated as a cause of fatigue in autoimmune diseases.4 If responsible for fatigue in SS, it could serve as a treatment target. The purpose of this study was, therefore, to examine the relation between fatigue and immune variables in SS.

Thirty six consecutive patients with primary SS visiting our outpatient departments participated in this study. Two control groups were used: a group of 18 patients diagnosed with secondary SS, and a group of 36 non-medicated healthy diagnoses. Diagnoses were based on the revised European criteria for the classification of SS.5 Control groups were matched for age and sex. Disease duration or treatment did not differ significantly between patients with primary and secondary SS. Patients with other chronic diseases were excluded from the study. The Dutch Fatigue Scale (DUSFS) was used to quantify fatigue. This validated questionnaire poses nine questions about different aspects of fatigue (table 1).6 Because depression is frequently observed in SS, a standardised psychiatric questionnaire (SCL-90) was used to rule out this potential confounding variable for fatigue.7 Immunological activity was evaluated by assessing rheumatoid factor, antinuclear antibodies, presence of anti-SS-A and anti-SS-B, levels of immunoglobulins (IgG, IgM, and IgA), haemoglobin levels, leucocytes, thrombocytes, erythrocyte sedimentation rate, and C reactive protein (CRP). After preliminary analysis using correlation tests, the best model to explain fatigue was calculated by using multiple regression with forward selection (SPSS version 8.0). Independent Student t tests were used to compare the studied groups.

Fatigue was equally raised in patients with both primary and secondary SS, and differed significantly from that of healthy controls. Twenty one (58%) patients with primary SS scored “high” or “very high” out of the six categories for depression according to the SCL-90 criteria. These depression scores did not significantly differ from the scores in secondary SS patients. Further analysis showed that 79% of the fatigue in patients with primary SS could be explained by depression, total level of immunoglobulins, and thrombocyte counts (p<0.001). Both depression and thrombocyte counts showed a significant positive correlation, whereas levels of immunoglobulins showed a negative correlation.

Though treating as a targeting agent, the immune and inflammatory variables failed to predict fatigue satisfactorily in primary SS. Levels of immunoglobulins showed, surprisingly, a significant negative correlation. Thrombocyte counts showed a significant positive correlation. Although increases in thrombocytes follow the acute phase reaction, no significant correlation between thrombocyte counts and CRP levels were found. A chance association between fatigue and thrombocyte counts as well as immunoglobulin levels seems thus possible. Therefore, the intriguing question whether immune or inflammatory activity is a causative factor of chronic fatigue in SS remains unravelled. Because no difference in fatigue was found between patients with primary and secondary SS, the presence of another autoimmune disease appears to have no additional effect on the amount of fatigue in SS. In agreement with findings of previous studies, a significant relation was found between the degree of fatigue and the level of depression in patients with primary SS.8 It is concluded that none of the laboratory variables reflecting immune activity predict fatigue satisfactorily in primary SS. Signs of depression, as present in most of the patients with primary SS, proved to be the most relevant cause of their exhausting fatigue. Therefore we recommend including a psychosomatic approach in the treatment of fatigue in primary SS.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Dutch Fatigue Scale. Each item is scored on a 1 to 4 point scale</th>
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<tbody>
<tr>
<td>1. Lassitude</td>
<td>2. Perceived need for additional energy to finish required tasks</td>
</tr>
<tr>
<td>3. Verbalisation of an unmitting and overwhelming lack of energy</td>
<td>4. Inability to restore energy, even after sleeping</td>
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<tr>
<td>5. Increase in rest requirements</td>
<td>6. Decreased libido</td>
</tr>
<tr>
<td>7. Inability to maintain usual routine</td>
<td>8. Impaired ability to concentrate</td>
</tr>
<tr>
<td>9. Decreased performance</td>
<td>10. Inability to function</td>
</tr>
</tbody>
</table>

References


wise men of steroid research, describes the history of the glucocorticoids graphically and in detail. He has enriched research in this field with significant contributions since the beginning of the 1960s and now looks back amusingly and expressively on the past decades. Luca Parente’s contribution ranges from naturally occurring to synthetic glucocorticoids and their effects in the organism. The sections that deal with the desired anti-inflammatory/immunomodulatory effects and adverse reactions give a valuable overview.

A few chapters should be highlighted that are of particular interest for both rheumatologists and clinical immunologists. That on molecular and cellular aspects of cytokine regulation by glucocorticoids has been prepared very carefully from a didactic point of view. It not only describes T cell activation and the effects of glucocorticoids thereon, but also provides useful information for an understanding of the function and regulation of cytokines. It is recapitulated that the central therapeutic effects of glucocorticoids are ultimately the inhibition of the synthesis of interleukin 2 and interleukin 6; glucocorticoids influence the transcription of around 1% of all genes! However, they also have an influence on the translational and post-translational mechanisms by which proteins are synthesised, processed, and exported from cells. This fact applies, in particular, to the influence on cytokine metabolism. Just to mention a few key concepts: post-transcriptional, translational, and post-translational mechanisms; modulation of cytokine receptors; indirect effects that occur as a result of the extensive interactions among various cytokines.

The chapter written by John Kirwan is worth reading for the rheumatologist, as it deals with the clinical aspect of the systemic administration of glucocorticoids in chronic inflammatory arthritis (typified by rheumatoid arthritis (RA)), in vasculitic episodes and five workshops: patients’ perceptions, imaging (healing), progressive systemic sclerosis, mean clinical important difference, and osteoarthritis.

Contact: Conference Organisers Q2Q, 7 Swan Street, Old Islington, Middlesx TW7 6RJ, UK Tel: +44 20 8569 9555 Email: q2q@q2q.co.uk

British Society for Rheumatology XIth AGM
23–26 Apr 2002; Brighton, UK
Contact: BSR, 41 Eagle Street, London WC1R 4TL, UK Website: www.rheumatology.org.uk

4th EULAR Sonography Course
25–28 April 2002; Madrid, Spain
The course is entitled “Practical use of musculoskeletal ultrasonography.”
Contact: Esperanza Naredo Email: enaredo@eresmas.com Website: www.eular.org/courses and www.sameint.it/eular

10th International Vasculitis and ANCA Workshop
25–28 Apr 2002; Cleveland, Ohio, USA
Contact: Deborah J Bork, The Cleveland Clinic Foundation, Desk A50, Center for Vasculitis Care and Research, 9500 Euclid Avenue, Cleveland, OH 44195, USA Tel: 216 445 8533 Fax: 216 445 7569 Email: borkd@ccf.org Website for registration and abstract submission: www.clevelandclinicmeded.com/courses/Vasculitis2002.asp

International Congress: New Trends in Osteoarthritis
9–11 May 2002; Milan, Italy
Contact: Organising Secretariat, O.I.C. S.r.l., Via Fatebenefratelli 19, 20121 Milan, Italy Tel: +39 02 65 71 200 Fax: +39 02 65 71 270 Email: osteoarthritis@oic.it

10th International Congress on Behcet’s Disease
27–29 June 2002; Berlin, Germany
Under the auspices of the International Society for Behcet’s Disease
Up to eight young investigator awards, each of $500, will be awarded on the basis of abstracts submitted
Contact: Professor Ch C Zoubbouls, Department of Dermatology, University Medical Centre Benjamin Franklin, The Free University of Berlin, Fabeckstrasse 60–62, 14195 Berlin, Germany Fax: 49 30 84456908 Email: zoubbere@zedat.fu-berlin.de Website: www.userspages.fu-berlin.de/~zoubbere 15SBd website: www.behcet.ws

29th Scandinavian Congress of Rheumatology
15–18 Aug 2002; Tromso, Norway
Contact: Hans Nossent, Department of Rheumatology, University Hospital Tromso, Norway Tel: 47 776 27294 Fax: 47 776 27258 Email: 29scr2002@rito.no or revhan@rito.no

Translational Research in Autoimmunity
21–22 Sep 2002; Pavia, Italy
Contact: Organising secretariat: eventi S.R.L., Corso Cavour, 18/20 - 27100 Pavia, Italy Email: tara@e20pr.com Website: www.e20pr.com Congress website: www.medicine.ucsd.edu/ albani/2001 meeting

OsteoArthritis Research Society International (OARSI) World Congress
22–25 Sep 2002; Sydney, Australia
Contact: OsteoArthritis Research Society International (OARSI), 2051 M Street, NW, Suite 800, Washington DC 20036, USA Tel: +1 202 367 1177

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11–15 Mar 2002; Manchester, UK
No previous experience in epidemiology is needed. The course is residential and limited to 25 places
Contact: Ms Lisa McClair, ARC Epidemiology Unit, University of Manchester, Oxford Road, Manchester M13 9PT, UK Tel: +44 (0)161 275 5993 Fax: +44 (0)161 275 5043 Email: Lisa@js16.sct.man.ac.uk

OMERACT VI
11–14 Apr 2002; Brisbane, Queensland, Australia
Includes two modules: MRI and economics; and five workshops: patients’ perceptions, imaging (healing), progressive systemic sclerosis, mean clinical important difference, and osteoarthritis.
Contact: Conference Organisers Q2Q, 7 Swan Street, Old Islington, Middlesx TW7 6RJ, UK Tel: +44 20 8569 9555 Email: q2q@q2q.co.uk

F Buttgereit

IOF World Congress on Osteoporosis
10–14 May 2002; Lisbon, Portugal
Contact: IOF Secretariat, 71 cours Albert Thomas, F-69003 Lyon, France Tel: +33 472 91 41 77 Fax: +33 472 36 90 52 Email: info@ioflyon.org Website: www.osteofound.org

5th European Conference on Systemic Lupus Erythematosus
26–30 May 2002; Athens, Greece
Chairman Professor HM Moutsopoulos Secretariat: Amphitiron Congress Organising Bureau Email: moutsop@yahoo.com Website: congress@amphitiron.gz

Annual European Congress of Rheumatology
12–15 June 2002; Stockholm, Sweden
Contact: Fred Wyss, Executive Secretary EULAR, Wirkonkerrasitasse, 15, CH-8032, Zurich, Switzerland Tel: +41 1 383 9690 Fax: +41 1 383 9810 Email: eular@bluewin.ch Website: www.eular.org
10th International Congress on Antiphospholipid Antibodies
29 Sep–3 Oct 2002; Sicily, Italy
Deadline for abstracts 1 April 2002
Contact: Secretariat, 10th International Congress on Antiphospholipid Antibodies, c/o Kenes International, PO Box 50006, Tel Aviv 61500, Israel
Tel: 972 3 51 40018/9
Fax: 972 3 51 40077 or 972 3 51 72484
Email: aps@kenes.com
Website: www.kenes.com/aps

Third International Congress on Spondyloarthropathies
2–5 Oct 2002; Gent, Belgium
Topics covered will be:
• Innate immunity
• Genetics and HLA-B27
• Animal models and pathogenesis
• Clinical research and therapy
Deadline for abstract submission 31 March 2002
Contact: Organisation and secretariat, Medicongress, Waalpoel 28–34, B-9060 Assenede, Belgium
Tel: +32 9 344 39 59
Fax: +32 9 344 40 10
Email: congresses@medicongress.com
Website: www.medicongress.com

7th International Conference on Eicosanoids and Other Bioactive Lipids in Cancer, Inflammation and Related Diseases
14–17 Oct 2002; Nashville, Tennessee, USA
Contact: Lawrence J Marnett, Biochemistry Department, Vanderbilt University, School of Medicine, Nashville TN 37232-0146, USA
Tel: (615) 343 7329
Fax: (615) 343 7534
Website: www.eicosanoids.science.eayne.edu

66th American College of Rheumatology AGM
25–29 Oct 2002; New Orleans, USA
Contact: ACR, Ronald F Olejko, Director of Conferences and Meetings, 1800 Century Place, Suite 250, Atlanta, Georgia 30045–4300, USA
Tel: +1 404 633 3777
Fax: +1 404 633 1870
Email: acr@rheumatology.org
Website: www.rheumatology.org

Third International Meeting on Social and Economic Aspects of Osteoporosis and Osteoarthritis
7–9 November, 2002; Barcelona, Spain
Contact: Yolande Piette Communication, Boulevard Kleyer 108, 4000 Liège, Belgium
Tel: 32 4 254 12 25
Fax: 32 4 254 12 90
Email: ypc@compuserve.com

Certifying Examination in Pediatric Rheumatology
18 Nov 2002
Contact: American Board of Pediatrics, 111 Silver Cedar Court, Chapel Hill, NC 27514-1513, USA
Tel: 919 929 0461
Fax: 919 918 7114 or 919 929 9255
Website: www.abp.org

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21–24 June 2006; EULAR 2006 Amsterdam, The Netherlands

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