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, Ariji 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 sonographic 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 Performance and logistic regression analysis of diagnostic criteria for Sjögren’s syndrome

<table>
<thead>
<tr>
<th>Sialography</th>
<th>Sonography</th>
<th>Saxon</th>
<th>Schirmer</th>
<th>SS-A</th>
<th>SS-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity [%]</td>
<td>87</td>
<td>76</td>
<td>70</td>
<td>59</td>
<td>83</td>
</tr>
<tr>
<td>Specificity [%]</td>
<td>98</td>
<td>94</td>
<td>71</td>
<td>57</td>
<td>56</td>
</tr>
<tr>
<td>Accuracy [%]</td>
<td>92</td>
<td>84</td>
<td>71</td>
<td>59</td>
<td>70</td>
</tr>
<tr>
<td>Univariate analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient</td>
<td>6.02</td>
<td>3.69</td>
<td>1.67</td>
<td>0.56</td>
<td>1.92</td>
</tr>
<tr>
<td>p Value</td>
<td>&lt;0.00001</td>
<td>&lt;0.00001</td>
<td>0.00006</td>
<td>0.00787</td>
<td>&lt;0.00001</td>
</tr>
<tr>
<td>Multivariate analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient</td>
<td>4.87</td>
<td>3.97</td>
<td>1.06</td>
<td>1.07</td>
<td>NS</td>
</tr>
<tr>
<td>p Value</td>
<td>&lt;0.00001</td>
<td>0.00002</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>

The performance of each of the diagnostic criteria. Sialography performed best among the five diagnostic criteria—that is, sialography, functional tests (Saxon and Schirmer), and serological tests (SS-A and SS-B). Interestingly, when used instead of sialography, sonography provided a good per-

In conclusion, a diagnosis of Sjögren’s syn-
drome can be made on the basis of a wide range of diagnostic tests, and not merely on fixed combinations of these tests. Evaluation of salivary gland involvement contributes sig-

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Figure 1 Sialography (A and B) and sonography (C and D) of the parotid glands in patients who presented with sicca syndrome (dry eyes and dry mouth). Normal glands (A and C), and glands affected by Sjögren’s syndrome (B and D) are shown for comparison. Sialography of the parotid glands with Sjögren’s syndrome shows characteristic globular (B) staining patterns. Sonography of the parotid glands with Sjögren’s syndrome shows irregular echogenicity and multiple hyperechoic bands and hypoechoic areas in the gland (D).
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 persistence of the arthritis, the patient 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 part in the pathological condition of our patient. Dermatological assessment of patients treated with sulfasalazine for PsA has shown signs of cutaneous improvement compared with those receiving placebo.7 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;8 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.

References

Nail lesions in psoriatic arthritis: recovery with sulfasalazine treatment

Treatment with sulfasalazine has been reported to be effective in psoriatic arthritis (PsA).1 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 canal and intergluteal fold were seen, prompting the diagnosis of psoriasis partim.

Synovial fluid from the right knee joint contained 17.8×10⁶ 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.

Figure 1 Left index finger (A) before, (B) after six months’ treatment with sulfasalazine. The nail deformities in both hands are no longer present.

Home sequential high dose intravenous immunoglobulins in systemic autoimmune disease

The high cost of IV immunoglobulins is often considered to be a disadvantage of this treatment. However, this does not take into account the benefits gained—for example, the savings achieved in the costs of corticosteroids and immunosuppressive drugs and, above all, the improvement in quality of life achieved through functional improvement, as noticed in inflammatory myopathies and Still’s disease.” It is precisely to minimise the costs of IV immunoglobulin treatments and to enable patients to remain at home that we have developed the administration of IV immunoglobulins at home when sequential treatments are necessary.

Between January 1995 and March 2000 30 patients (18 women, 12 men) were enrolled, with a mean (SD) age of 44 (0.9) for the women and 51 (0.9) years for the men (range 21–74). All the patients had received the first two treatments in hospital to ascertain their tolerance. Patients mostly received Tégéline (314 treatments), Endobuline (81 treatments), and Gammagard (three treatments). All the patients had a corticoid-dependent or refractory autoimmune disease (mostly polyarthritis, dermatomyositis, and adult onset Still’s disease).

The doses prescribed for each treatment were generally 2 g/kg. Treatments were carried out monthly and consisted of two days when performed in hospital and five days when performed at home. The average flow rate of the IV immunoglobulin perfusions performed at home was 10 g/2 h (extreme values: 30 min–4 h). The secondary effects of the treatments at home remained conventional and minor.

The efficacy of the IV immunoglobulin was described by the patients as very good 17%, good 33%, modest 9%, nil 47%. The efficacy of the IV immunoglobulin was described by the senior doctor as very good 33%, good 30%, nil 17%. Evaluation of the efficacy described by the patients themselves was based on purely functional criteria (general condition, pain, mobility, response to IV immunoglobulin, and improvement of the autoinflammatory disease).
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>$2955</td>
<td>$605</td>
<td>$41</td>
<td>$580556</td>
<td>(15% \text{ of retrocession overcost}^{*})</td>
</tr>
<tr>
<td>Effective cost at home</td>
<td>$2363</td>
<td>$67</td>
<td>$84588</td>
<td>$580556 (\text{representing the virtual economy made by the hospital department (drug budget + small equipment)})</td>
<td></td>
</tr>
</tbody>
</table>

Cost for one treatment in hospital: $2701

Cost for one treatment at home: $2471

*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 contra-indication of home IV immunoglobulin programme: coronaropathy, 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

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References

Elastofibroma dorsi

Elastofibroma is a rarely diagnosed benign fibroproliferative 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...
malignant tumours. We report a case of elastofibroma in a patient who presented with shoulder pain to a rheumatology clinic, and review previous publications. Although elastofibroma is uncommon, it has received attention in radiological and orthopaedic publications but not in rheumatology published reports.

A 43 year old Turkish woman, previously fit and healthy, was referred to our outpatient clinic with a two year history of right shoulder pain. The pain was described as a dull ache of gradual onset, around the posterior aspect of the shoulder over the scapula, which was worse on movement of the arm. There was no weakness. Over the preceding four months the patient had noticed a swelling below the inferior angle of 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 mobile mass of 5 cm was apparent under 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 signal intensity was similar to that of skeletal muscle but interspersed with fat. No significant contrast enhancement was seen. The lesion was biopsied under computed tomography guidance and a histological examination showed elastic fibres within a collagenous fibrous tissue with entrapped adipose tissue, consistent with a diagnosis of 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 dorsi, first described in 1961, is a benign, slow growing, mesenchymal soft tissue lesion. They usually occur in active subjects above the age of 50 with a male:female ratio of 1:5. 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. Of those in the subscapular region approximately 10% are bilateral. 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. Clinically, over 50% of subjects are asymptomatic and may present with a painless swelling; approximately 15% present with a clicking sensation when the arm is moved, while fewer than 10% present with pain.

Plain radiographs may be normal or may show soft tissue density in the periscapular region when the scapula is raised. Computed tomography usually shows a heterogeneous soft tissue mass with poorly defined margins. 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. 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. 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. 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

Olecranon bursitis due to Candida parapsilosis in an immunocompetent adult

Septic bursitis (SB) mainly affects the olecranon and patellar bursa. Subcutaneous localisation predisposes to trauma and may subsequently lead to infection. Most cases of SB are related to the subject’s occupation (roofing, gardening, plumbing), but surgical interventions (aspiration, intrabursal injection) are among other probable causes. Septic bursitis is quite rare and always associated with immunosuppression or debilitating conditions, but some species of Candida, Cryptococcus, Penicillium, and Spathotrix schenkii have been described. These atypical organisms usually develop in a late indolent pattern, and a delay in diagnosis and treatment may lead to considerable difficulties in eradication of infection. We report a case of SB caused by Candida parapsilosis in a previously healthy man, with no underlying disease or any risk factors, including HIV infection, who probably acquired joint infection at the hospital secondary to local steroid injection.

Case report
A 32 year old man with a one month history of mild inflammation of the right elbow presented to our hospital on 19 May 2000. He had...
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 (fluocytone injection) was decided on. Bursal effusion was repeated over the next four days, so a further aspiration was carried out and local injection with triamcinolone acetonide (20 mg) was given. However 24 days later the pain worsened and swelling of the elbow recurved. Laboratory synovial findings showed a leucocyte count of 15.7 × 10⁶ cells/l (60% neutrophils) and a low glucose level (0.8 mmol/l). Culture yielded a few colonies of Candida spp, but antifungal treatment was not started because it was considered that this might be caused by contamination. One month later (28 July), the patient presented to the emergency room owing to development of a new, extremely painful episode of bursitis. After joint aspiration, a steroid injection was again given, but this time a fluid culture was not carried out.

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 multisepate bursitis; the adjacent structures were normal. A removal of 10 ml bursa fluid again yielded a positive culture for Candida that was later identified as C. parapsilosis (Majadahonda (Madrid), National Centre for Microbiology). Antifungal sensitivity testing showed a minimal inhibitory concentration for amphotericin B of 1 mg/l, 5-flucytosine 0.25 mg/l, fluconazole 0.23 mg/l, itraconazole 0.03 mg/l, and ketoconazole 0.015 mg/l. By the end of August, oral fluconazole was started at a dose of 400 mg/day for seven days, and then 200 mg daily. Recovery was slow and the patient needed repeated drainage. As follow up cultures were still positive, on 27 September it was decided to carry out surgical debridement with complete excision of the olecranon bursa. This material was not cultured, but histopathological analysis was performed demonstrating pseudohyphae structures, without granulomatous reaction or foreign bodies. After bursectomy, the patient continued fluconazole treatment (same maintenance dose) for six weeks more. Six months later he is completely asymptomatic.

Infection of superficial bursae (olecranon, prepatellar, and infrapatellar) is generally associated with different occupations or physical activities. Local trauma may predispose micro-organisms to penetrate by the transcutaneous route. Similarly, intrabursal steroid injection, a habitual therapeutic procedure, may lead to infection. Weinstein et al. noted that development of infection after this procedure occurred in 12% of a series of cases. Most frequently bacteria cause infections, but unusual pathogens like fungi have also been described. Candida septic bursitis is extremely rare. 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 five 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.

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 exogenous source of infection. Appropriately antifungal drugs to treat Candida infections are available, but appropriate drug levels in osteoarticular structures are difficult to achieve. So for successful treatment of this infection, surgery is sometimes required. Half of the patients with Candida SB reviewed needed surgery for complete resolution (table 1). We would like to summarise several aspects of the present report: Firstly, steroid injection must never be omitted. We would like to summarise several aspects of the present report: Firstly, steroid injection must never be omitted. We would like to summarise several aspects of the present report: Firstly, steroid injection must never be omitted. We would like to summarise several aspects of the present report: Firstly, steroid injection must never be omitted. We would like to summarise several aspects of the present report: Firstly, steroid injection must never be omitted. We would like to summarise several aspects of the present report: Firstly, steroid injection must never be omitted. We would like to summarise several aspects of the present report: Firstly, steroid injection must never be omitted. Where feasible, this infection must never be omitted.

Because unusual micro-organisms are difficult to recognise and anti-inflammatory drugs may mask the symptoms, a higher degree of awareness is necessary to achieve prompt diagnosis and successful treatment. Nevertheless, special care must be taken to avoid complicating side effects in iatrogenic manipulations, so preventive measures to reduce the incidence of infection must never be omitted.

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Table 1 Main clinical features of candida bursitis

<table>
<thead>
<tr>
<th>Case [ref]</th>
<th>Age/sex</th>
<th>Candida strains</th>
<th>Localisation</th>
<th>Underlying disease/risk factors</th>
<th>Probable source</th>
<th>Treatment</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 [3]</td>
<td>73/M</td>
<td>C albicans</td>
<td>Subacromial</td>
<td>SLE/steroids</td>
<td>AMB</td>
<td>Cure</td>
<td></td>
</tr>
<tr>
<td>2 [5]</td>
<td>77/M</td>
<td>C tropicalis</td>
<td>Olecranon</td>
<td>Bladder carcinoma</td>
<td>AMB + surgery</td>
<td>Cure</td>
<td></td>
</tr>
<tr>
<td>3 [6]</td>
<td>48/M</td>
<td>C parapsilosis</td>
<td>Popliteal</td>
<td>Luphyma/immunomusparse drugs</td>
<td>AMB, ketoconazole</td>
<td>Cure</td>
<td></td>
</tr>
<tr>
<td>4 [7]</td>
<td>64/M</td>
<td>C albicans</td>
<td>Popliteal</td>
<td>Alcoholism/steroids, antibiotics</td>
<td>AMB</td>
<td>Cure</td>
<td></td>
</tr>
<tr>
<td>5 [8]</td>
<td>59/F</td>
<td>C lusitaniae</td>
<td>Olecranon</td>
<td>SLE, diabetes, asthma, steroids, immunomusparse drugs</td>
<td>Fluconazole; 5-FC</td>
<td>Failure</td>
<td></td>
</tr>
<tr>
<td>6 [9]</td>
<td>32/M</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-flucytosine.
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.

**References**


10. Dredberg S, Backman A, Basomba A, et al. Skin tests in used in a series of children have been shown to relieve symptoms, but fail to deal prospectively with the prevention of IgA sensitization. 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 cryoglobulinemic vasculitis through the defective metabolism of GICs.

- Graft-versus-host disease and hepatitis C have often been observed in patients with HSP, and it is possible that these conditions may be related.

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

Hench-Schönlein purpura (HSP) is a systemic small vessel vasculitis predominantly affecting children and, less commonly, adults.

Classical HSP includes a tetrads of palpable purpura, arthritis, abdominal pain, and mesangial glomerulonephritis. Abdominal pain is present within 5–7 days of rash, and is usually self-limiting with colicky abdominal pain, but may progress to ischaemic bowel perforation. Hench-Schönlein purpura (HSP) is a systemic small vessel vasculitis predominantly affecting children and, less commonly, adults.

- 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 cryoglobulinemic vasculitis through the defective metabolism of GICs.

- Graft-versus-host disease and hepatitis C have often been observed in patients with HSP, and it is possible that these conditions may be related.

**Acknowledgments**

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;10^9/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 phosphatase (U/l)</td>
<td>99</td>
<td>35–105</td>
</tr>
<tr>
<td>Aspartate aminotransferase (U/l)</td>
<td>40</td>
<td>11–32</td>
</tr>
<tr>
<td>Alanine aminotransferase (U/l)</td>
<td>39</td>
<td>5–30</td>
</tr>
<tr>
<td>Lactate dehydrogenase (U/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>13</td>
<td>0–3</td>
</tr>
<tr>
<td>Urine analysis (RBC/HPF)</td>
<td>20</td>
<td>&lt;1/40</td>
</tr>
</tbody>
</table>

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

Figure 1  Immunofluorescence staining of a skin biopsy from a purpuric lesion. Direct immunofluorescence study showing granular deposition of IgA in the walls of superficial dermal blood vessels, a characteristic finding in Henoch-Schönlein purpura.

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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, 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 UI/ml. Tests for antimicrobial 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 systolic 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 dilatation (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 ST. The postoperative course was uneventful. Pathological evaluation of the excised strongly thickened and fibrotic trileaflet aortic valve was performed.

Microscopic findings in one of the rheumatoid leaflets showed preserved leaflet tissue with lymphoplasmocellular infiltration and some polymorphonuclear cells around two areas of fibroid 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

Figure 1  Section from aortic valve cusp showing a central area of fibroid necrosis (a), a palisade of radially arranged histiocytes (b), and a lymphoplasmocytic infiltrate [c] (haematoxylin and eosin). Bar represents 400 µm.
changes of fibrosis and necrosis. Valvular involvement has been described in patients with all types of JIA; 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, cardiologist, 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.

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References


Polymyalgia rheumatica and pericardial tamponade

Polymyalgia rheumatica causes symmetrical stiffness in the neck, shoulder, and pelvic girdles, and affects middle aged and elderly people, with a higher incidence among women. A group of systemic, non-specific symptoms such as weight loss, moderate fever, asthenia, and persistent high erythrocyte sedimentation rate are other clinical features.

The association of polymyalgia rheumatica and pericardial effusion has already been described in two cases.1,2

A 73 year old woman was admitted for the evaluation of pericardial effusion and mild anaemia. Polymyalgia rheumatica was suspected because the patient had had asthenia, stiffness, and pain in the shoulders and hips for about a year before coming to hospital. She had also lost 5 kg in a few months. A few days before admission she had presented worsening dyspnoea.

An echocardiogram showed large pericardial effusion and initial findings of cardiac tamponade (right atrial and right ventricular diastolic collapse), so a pericardiocentesis was done: polymerase chain reaction tests in the pericardial fluid for Mycobacterium tuberculosis and cultures for aerobes and anaerobes were negative; tumoral cells were absent. Serological tests for antibodies to cytomegalovirus, herpes simplex and Epstein-Barr viruses, anti-smooth muscle, antinuclear, anti-DNA, and anti-extractable nuclear antigen antibodies were negative. The complete blood profile and the break-up time were also normal. The erythrocyte sedimentation rate (ESR) was 130 mm/h and C reactive protein (CRP) was 85 mg/l.

The patient was first treated with indometacin (50 mg twice a day) for a week, with no improvement, and then with low doses of prednisone (10 mg/day): the symptoms markedly improved and the ESR and CRP dropped to 27 mm/1st h and 12 mg/l respectively, in a few weeks. An echocardiogram a month later was negative for pericardial effusion; ESR and CRP were also normal.

The patient has remained entirely well after a follow up of one year.

The presenting symptoms (girdles bilateral and symmetrical stiffness and pain) are accompanied by systemic features (fatigue, weight loss, raised ESR) and the marked improvement after prednisone confirm the diagnosis of polymyalgia rheumatica.

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

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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 (TNFα) blocking treatment.3 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 Behçet’s disease with joint involvement (rheumatic arthritis) and keratoconjunctivitis sicca. The disease worsened progressively over the years with the appearance of polyclonal hypergammaglobulinemia and peripheral arthritis. In parallel, the patient reported recurrent buccal ulcerations 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 sulfasalazine and colchicine without improvement; steroid treatment with auranofin was added. The disease was poorly controlled, with 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 microvascular and cutaneous lesions as well as...
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 symptom.

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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 tempting as a treatment target, 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 untravelled. 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. 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.

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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 typified by those in systemic lupus erythematosus, and in polymyalgia rheumatica and temporal arteritis. It is cleverly written, because it questions apparently known facts, and in polymyalgia rheumatica and temporal arteritis. It is cleverly written, because it questions apparently known facts, which may affect the etiology of the disease. The author describes the clinical aspects of the disease, and how the use of glucocorticoids can be of benefit to the patient. He also discusses the potential adverse effects of these drugs and how to manage them.

Tenth Intensive Applied Epidemiology Course for Rheumatologists 11–15 Mar 2002; Manchester, UK No previous experience in epidemiology is needed. The course is residential and limited to 25 places.

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5th European Conference on Systemic Lupus Erythematosus 26–30 May 2002; Athens, Greece Chairman Professor HM Moutsopoulos Secretariat: Amphitiron Congress Organising Bureau Email: h.moutsop@med.uoa.gr
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Annual European Congress of Rheumatology 12–15 June 2002; Stockholm, Sweden Contact: Fred Wyss, Executive Secretary EULAR, Wirkittenstrasse 15, CH-8032, Zurich, Switzerland Tel: +41 1 383 9600
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