



Figure 2 Course of essential laboratory data and treatment regimen of patient two.

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## Prevalence of hepatitis C virus antibody in patients with systemic lupus erythematosus

Systemic lupus erythematosus (SLE) is a disease of unknown aetiology characterised by impaired immune regulation and production of polyclonal autoantibodies. It is reported in the medical literature that in patients with chronic hepatitis resulting from hepatitis C virus (HCV) more autoantibodies such as antinuclear antibodies, anti-ds DNA, antiphospholipid antibody, antithyroglobulin antibody, rheumatoid factor, cryoglobulinaemia, and anti-GOR (an HCV induced, host derived epitope) are seen than in patients with other causes of hepatitis virus.<sup>1-3</sup> There have also been reports on HCV associated with several immunological diseases including membranoproliferative glomerulonephritis,<sup>4</sup> polyarteritis nodosa,<sup>5</sup> essential mixed cryoglobulinaemia,<sup>6</sup> Sjögren's syndrome,<sup>7</sup> and rheumatoid arthritis.<sup>8</sup> There are not enough data, however, on the frequency of HCV infection in SLE cases. Therefore, we planned a study to investigate prevalence of anti-HCV in SLE cases.

Thirty eight patients (36 female) with SLE were included in the study. Their mean (SD) age was 31 (12) years (range 8-64). Diagnosis of SLE was made according to revised criteria of the American Rheumatology Association.<sup>9</sup> The most common clinical and laboratory findings include arthralgia (59%), fever (58%), cutaneous manifestations (20%), leucopenia (40%), lupus nephritis (65%), antinuclear antibodies (80%), anti-DNA (49%), and low values of C3 and C4 (40%).

Antibodies against HCV encoded antigens (c100, 33c, c22) were assessed by the second generation Abbott enzyme linked immunosorbent assay (ELISA) according to manufacturer's instructions. It was estimated that the prevalence of anti-HCV antibodies (second generation ELISA) in the healthy population was 1.4% in our region. The  $\chi^2$  test was used to perform statistical comparison. Table 1 shows the findings.

Anti-HCV was found to be positive in only one (2.6%) patient. She was 33 years of age.

Table 1 The comparison of anti-HCV between the general population and patients with SLE

	Total (n)	anti-HCV(+) (n)	Frequency (%)
General population	5257	77	1.4
Patients with SLE	38	1	2.6*

\*  $p > 0.05$ .

No transmission risk was found except for spinal surgery one year before the symptoms and signs of the disease began. She had not received any blood, and there was no abnormality in the liver function tests during her follow up.

We found no significant difference between healthy population and SLE patients in terms of prevalence of anti-HCV ( $p>0.05$ ). In the medical literature, we could not find any study about the prevalence of anti-HCV in SLE patients. However, Michel *et al*<sup>10</sup> in their study about anti-GOR and HCV in autoimmune liver diseases have reported no anti-HCV in 10 SLE patients.

Our results showed that the prevalence of the anti-HCV in patients with SLE was not higher than that of the general population, and the relation between HCV and SLE could not be established.

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## Gouty arthritis in the manubriosternal joint

Gouty arthritis rarely involves anphiartriodial joints such as the manubriosternal joint. We report a case of recurrent manubriosternal joint (MSJ) pain in a patient with idiopathic, tophaceous chronic gouty arthritis.

A 52 year old man consulted for recurrent swelling of ankles, wrists, knees, and feet during the previous 12 years. His family doctor had previously made a diagnosis of gout, and intermittent colchicine and allopurinol 100 mg/day were prescribed. Despite treatment, however, he experience episodes of gout three to four times a year and he stopped treatment. Alcohol intake was about 100 g/day. During the previous two years he was admitted twice to the emergency unit for intense, acute, anterior thoracic pain located on the sternum that lasted two or three days and was ameliorated by analgesics. Electrocardiograms and chest roentgenograms were reported to be normal.

Physical examination on the first visit showed that he was 15 kg overweight, tophi were present in both olecranon bursae, and limitation of the mobility of mid-feet, ankles, and wrists was present. Aspiration from tophi showed monosodium urate crystals under optical polarised microscopic examination. Roentgenograms disclosed signs of chronic gouty arthropathy in mid-feet. Plasmatic uric acid was 9.1 mg/dl, clearance of urate 5.48 ml/min/1.73 m<sup>2</sup>, clearance of creatinine 123 ml/min/1.73 m<sup>2</sup>, urinary urate 726 mg/day. Liver function tests and blood cell count were within normal limits. A hypocaloric (2000 kcal/day) alcohol free diet was prescribed, together with allopurinol 300 mg/day and diclofenac 50 mg/day.

Three weeks later he suffered acute gastroenteritis and a polyarticular gouty attack involving elbows, wrists, knees, and ankles and was admitted into hospital. Pain was also present on MSJ, and local soft tissue swelling was observed. A chest radiograph showed degenerative signs on the MSJ (fig 1). Aspiration of MSJ yielded a few drops of bloody fluid. Urate crystals were observed in a wet preparation under polarised examination, and in samples obtained from a knee. No



Figure 1 Lateral radiograph of the MSJ (close up photograph), showing joint irregularities and prominent anterior and posterior osteophytes that suggest chronic arthropathy.

microorganism was recovered from blood, stools or synovial fluid samples. Prednisone 20 mg/day was prescribed with complete recovering in eight days. Then prednisone was gradually tapered (5 mg each five days). After a five year follow up, the patient is asymptomatic, tophi resolved, and plasmatic uric acid is 4.1 mg/dl with allopurinol 300 mg/day. No chest pain episodes have occurred during follow up.

Gouty arthritis most commonly locates in peripheral synovial joints. Involvement of spine, sacroiliac joints, symphysis pubis or thoracic wall is rare.<sup>1</sup> The opposing osseous surfaces of the manubrium and the body of the sternum are covered by hyaline cartilage and separated by fibrocartilage; in one third of persons, this fibrocartilage cavitates and in 15% it may osify and form a synostosis.<sup>2</sup> Gouty involvement of MSJ seems to be extremely uncommon: only two cases have been reported in the medical literature (MEDLINE search) in the past 10 years.<sup>3,4</sup> The rarity of MSJ involvement may be because of several reasons: firstly, only 30% of adults with chronic gout would show cavitation of MSJ that may predispose to urate crystal deposition; secondly, the more centrally a joint is located, the most uncommon is gouty involvement; thirdly, pain over the sternum in patients with chronic gout may be interpreted to be related to other causes and disappear with treatment for gout. In this case, as in both previously reported,<sup>3,4</sup> urate crystals were observed in fluid aspirated from the MSJ. The patient observed by Shrewing and Carvell<sup>4</sup> suffered recurrences despite appropriate treatment and underwent MSJ arthrodesis. Severe, progressive involvement of MSJ has also been reported in patients with pustulosis palmoplantaris<sup>5</sup> and surgical treatment may be considered in such cases,<sup>4</sup> but the present case also illustrates that some patients with poor control of serum urate concentrations may suffer from gouty attacks until proper treatment is started.<sup>6</sup> Indeed, this patient was free of symptoms after weight control,<sup>7</sup> alcohol withdrawal,<sup>8</sup> and achieving urate concentrations of under 6 mg/dl.<sup>6</sup>

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