Dramatic efficacy of cyclosporin was observed in a patient with inflammatory pseudotumour in the liver. The 30-year-old male patient had suffered several attacks of high fever, polyarthralgia and lymph node swelling since 1981. In February 1989, abdominal CT showed multiple space-occupying lesions in his liver, and histopathology of the biopsied liver showed infiltration of plasma cells and lymphocytes with proliferation of collagen fiber, which was comparable to an inflammatory pseudotumour. In May 1990, a treatment regimen of cyclosporin A along with prednisolone was begun because he had been diabetic since March 1990. Within a few days of treatment, the high fever and polyarthralgia subsided, and leucocytosis of 32,000/mm³ and the increased CRP of 17.7 mg/dl were normalised within one month. A reduction of the size of the space-occupying lesions in the liver was observed on abdominal CT taken one month after cyclosporin treatment.

Key words: cyclosporin, inflammatory pseudotumour, liver

Introduction

Inflammatory pseudotumour is a disease, with a vague identity categorized between inflammation and malignancy, which invades a variety of organs and is diagnosed through histopathological analysis of the tissues taken by biopsy or autopsy (1). The non-neoplastic polyclonal nature of the plasma cell component is the most common primary site, and low to high fever is the only common clinical symptom of this disease.

For treatment of this disease, besides surgical removal, corticosteroid (2) has been widely used. Other drugs such as hydroxychloroquine (3) and interferon (4) have been reported to be of benefit in the treatment of this disease.

Here, we report the dramatic effect of cyclosporin in a patient with an inflammatory pseudotumour in the liver.

Case Report

A 30-year-old male patient had suffered from several attacks of high fever, arthralgia and lymphadenopathy since 1981. Polyarthralgia was noted with swelling in the left hip and in both knees; his fever was 38°C, and lymphadenopathy was noted in the neck and axilla along with splenomegaly. Laboratory data showed leucocytosis of 17,600/mm³ with granulocytosis at 87%, positive CRP and a slightly raised blood sedimentation rate of 33 mm/h. Serological data were negative for rheumatoid factor, ASO, and antinuclear antibody, and PPD, Weil-Felix, and toxoplasma tests. No dysfunction was noted in the liver or kidney. Lymph node biopsy in the left axilla taken in October 1982 showed a non-specific change with reduced lymphocytes counts and diminished lymph follicles. Adult Still’s disease was suspected, and the patient was treated with non-steroid anti-inflammatory drugs, however these were not effective. Then prednisolone at 20 mg/day was administered which proved effective. With the addition of azathioprine at 50 mg/day, the state of remission was maintained from 1984 to 1988.

In November 1988, he suffered from attacks similar to that in 1981. Chest roentgenography taken in January 1989 revealed tumorous multiple mass lesions in the right lung field (Fig. 1A). Abdominal computed tomography (CT) taken in February 1989 showed multiple space-occupying lesions in his liver, and histopathology of the biopsied liver showed a clustered infiltration of mononuclear cells such as plasma cells, lymphocytes and histiocytes surrounded by collagen fibers in the hepatic lobules. These histological findings were comparable to
an inflammatory pseudotumour but not to viral hepatitis, lupoid hepatitis or neoplasma. His liver function, however, was shown to be normal. During this period, prednisolone was used in a 20–30 mg/day dose followed by this addition of cyclophosphamide at 50–100 mg/day. Fever was suppressed by this treatment, but arthralgia, leucocytosis of over 12,000/mm³ with granulocytosis of over 88% and higher titers of CRP ranging from 3.1 to 17.0 mg/dl persisted.

In March 1990, the patient contracted a high fever of 39°C and arthralgia. Leucocytosis was elevated at 32,000/mm³ with a granulocytosis of 93% and CRP was increased at 17.7 mg/dl. In addition, he exhibited noninsulin-dependent diabetes mellitus, and his fasting blood sugar level was increased to 240 mg/dl by the use of prednisolone. At this time, cyclosporin at 500 mg/day was administrated along with prednisolone at 15 mg/day for treatment of the inflammation. With two days of cyclosporin treatment, his high fever subsided and arthralgia improved dramatically.

After administration of cyclosporin, leucocyte counts decreased gradually from 29,000 to 15,900 on the fourth day of treatment, to 12,900 on the 21st day and 9,500/mm³ on the 28th day, as shown in Fig. 3. Accordingly, his CRP value decreased from 17.7 to less than 0.1 mg/dl (normal) on the 21st day. The dosage of cyclosporin was reduced gradually to 200, 150, and 100 mg/day and maintained at 100 mg/day.

No relapse has been noted over the subsequent four months. Disappearance of tumorous mass lesions in the lung (Fig. 1B) and a reduction in the size of the space-occupying lesions in the liver was observed on CT taken one month after cyclosporin treatment (Fig. 2).
Discussion

The therapeutic indications of cyclosporin have been gradually broadened to encompass a variety of diseases such as Wegener's granulomatosis (5), dermatomyositis (6), rheumatoid arthritis (7), uveitis in Behçet's disease (8), and Weber-Christian's disease. The effect of cyclosporin has been considered to be primarily the inhibition of the synthesis of IL-2 and interferon by helper T cells (9). However, as had been proven in the efficacy of cyclosporin in such cases as Wegener's granulomatosis or Behçet's disease, this drug can be expected to work on granulocytes or macrophages directly or indirectly through suppression of helper T cells. This might be the case here, where we observed an inflammatory pseudotumour in a liver with granulomatous lesions. The histology of the lung mass lesion was not examined, but it may be the same as that of the liver because the improvements seen after cyclosporin treatment were similar.

References