Can Ciclosporin A Be Used without Steroids in Systemic Lupus erythematosus?

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Dear Sir,

Ciclosporin A (CS-A; Sandimmun®, Sandoz) is an immunosuppressive drug used in autoimmune diseases, among which is systemic lupus erythematosus (SLE) [1, 2]. Its inhibitory action on the production of interleukin-2 and γ -interferon reduces the excessive proliferation of the B lymphocytes without any marked effect on the T-suppressor population [3–5]. It also appears to act on the intrarenal hemodynamics which would facilitate control of proteinuria [6]. To reduce its toxicity and insure synergistic action it is administered in small doses, 5 mg/kg/day, together with steroids or other immunosuppressive agents [1, 7].

Our description concerns a patient with SLE in whom we achieved partial remission of the nephrotic syndrome with CS-A and prednisone. An attempt to suspend the steroids led to an outbreak of systemic activity with no change in proteinuria.

The patient was a 22-year-old woman diagnosed as having SLE and diffuse proliferative glomerulonephritis. She was treated with pulses of methylprednisolone followed by prednisone taken orally 1 mg/kg/day and azathioprine 2 mg/kg/day. The systemic symptomatology and immunological parameters improved but there was no remission of the nephrotic syndrome. A year and a half later, CS-A treatment was begun with a dosage of 5 mg/kg/day given in two doses, with predose levels remaining at some 100 ng/ml (RIA with monoclonal antibodies in whole blood) with prednisone being maintained at between 20 and 30 mg/day. Two months after the commencement of treatment with CS-A, sustained partial remission

1 The authors are grateful to Mr. Ronald E. Williams for his technical assistance.

of the nephrotic syndrome was achieved and it was possible to cut down the dose of steroids to 10 mg/alternate day. There was no marked change in renal function and the fraction of sodium excretion. Seven months later on diagnosis of bone necrosis in the heads of both femurs, the prednisone was gradually phased out. Shortly afterwards the patient had a high temperature, oral aphthae, pericarditis and polyarthritis with no increase in proteinuria, nor deterioration of the renal function. This was cleared up by the use of 10 mg/day of prednisone.

Although experience in the use of CS-A in treating SLE is limited, the results seem promising, especially in serious cases of corticoreistance or corticodependence [4, 5, 8]. Its main advantage lies in a greater reduction in doses of steroid than is possible with other immunosuppressors.

However, some authors have written that CS-A may encourage the appearance of autoimmune phenomena [9], and others have related its use directly to an exacerbation of SLE [10]. In this patient, CS-A induced sustained partial remission of the nephrotic syndrome without any serious side effects. Suspension of prednisone was accompanied by extrarenal lupus symptoms with no increase in proteinuria nor change in the fraction of protein excretion. All this would support the thesis that remission of the nephrotic syndrome could depend basically on glomerular hemodynamics [6]. Moreover, direct action of the CS-A on the glomerular permeability, whether this is dependent or not on the systemic immunomodulator effect, cannot be ruled out [2]. To summarize, in this case the association of CS-A with small doses of prednisone provided an acceptable control of the renal and extrarenal symptoms of SLE which was not possible to maintain when trying to use CS-A as sole therapy.

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