Drug-induced Lupus Presenting with Myocarditis

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Sir,

Drug-induced lupus erythematosus (DILE) is an acquired condition caused by a variety of drugs like isoniazid, hydralazine and antibiotics like minocycline.¹ We here report a case of DILE presenting with a life threatening complication.

A 17 year old girl presented with continuous low grade fever and multiple joint pain of two months’ duration. Examination of the buccal cavity revealed an ulcer in the hard palate (Figure 1). She did not complain of any photosensitivity, rash or hair loss.

She was started on four drug anti-tubercular therapy four months ago. She was continuing the therapy at time of presentation. There was no other drug history.

Initial laboratory test revealed a hemoglobin of 5.9 gm/dl, total leukocyte count of 8700/µL and a platelet count of 36000/µL. Direct Coomb’s test was positive. Serum C reactive protein was 3.8 mg/L (N<6). Urine examination revealed 4-5 WBC/HPF and trace of proteinuria. Serum anti-nuclear antibody was positive in 1:640 dilution (homogeneous pattern). Serum C3 level was low (60 mg/dl). Anti-dsDNA was negative and anti-histone antibody was strongly positive.

On the 5th day, the girl suddenly started having respiratory distress and cough. She also had orthopnoea with oxygen saturation of 82%. Echocardiography revealed global hypokinesia of myocardium (ejection fraction 40%) (Figure 2). Electrocardiogram revealed sinus tachycardia with ventricular ectopics. Test for NT-pro-BNP came back as 2800 pg/ml (N<450). In view of the above investigation results, a provisional diagnosis of myocarditis was made. She was immediately started on intravenous pulse methylprednisolone followed by oral steroids. Also, supportive management like frusemide, enalapril and beta blockers were given.

In follow up, the patient had not developed any new symptoms. The anti-histone antibody became negative after eight months.

DILE has been reported to present with fever, arthralgia or arthritis and serositis.¹ The time duration between exposure to the drug and development of lupus features vary widely.¹ The exact pathogenesis of DILE is still debatable. But popular hypotheses include hapten hypothesis and lymphocyte activation hypothesis.¹

Major organ involvement in DILE is rare. In one series, a significant percentage of patients with DILE presented with renal impairment.² Also, some authors have reported central nervous system involvement in DILE.³ Cardiopulmonary involvement in DILE is similarly very rare.

Myocarditis in SLE has a poor prognosis. But immunosuppressives like methylprednisolone and/or cyclophosphamide have been used with success. Our patient also responded to the same treatment.

In India, where anti-tubercular drug is used very often, such unwanted medical complications should be looked for.

References