Letter to the Editor (Viewer's Choice)

CONCOMITANT RHEUMATIC FEVER AND DILATED CARDIOMYOPATHY: A CASE REPORT

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Key words: Dilated Cardiomyopathy, Acute Rheumatic Fever.

An 8 years old boy presented with pain and swelling in his knees for two weeks. He was advised ibuprofen. X-ray knees showed no abnormality. On admission, he complained of new onset of right ankle joint pain, fever, breathlessness, palpitation on exertion. Examination revealed temperature of 100.8oF, tender swollen ankle joints (right > left) and edema of the feet. On general examination, he had basal crepitations in both lungs, tender hepatomegaly and pansytolic murmur in mitral area. Investigations showed hemoglobin of 12.9g/dl, white blood cell count of 11,500 cells/cumm, neutrophils 9600 cells/cumm, erythrocyte sedimentation rate of 74mm at end of I hour and C-reactive protein of 90mg/l. Chest x-ray showed cardiomegaly with a cardiothoracic ratio of 0.59. Echocardiography revealed dilated cardiomyopathy (DCM) with left vertical dysfunction (ejection fraction of 39%) and global hypokinesia. In addition, there was mildly dilated left atrium. Left ventricular end diastolic dimension was 4.8. Pharyngeal throat swab culture showed streptococcus pyogenus. Anti-streptolysin antibody was raised, peaking at 6 weeks after onset

and declining thereafter. The highest titer reached were antistreptolysin O 2000 unit , DnasB 1900 unit, and antihyaluronidase 1024 unit. This indicates recent streptococcal infection along with carditis, polyarthritis, fever and positive acute phase reactants suggestive of rheumatic fever. Echocardiography was suggestive of DCM. Patient was treated with oxygen, prednisolone (2 mg/kg/day for six weeks then gradually tapering for another 6 weeks), Benzyl penicillin (15 lac unit in four divided doses for 10 days), furosemide, enalapril and carnitine. Later on patient was put on benzathine penicillin prophylaxis, enalapril and carnitine were continued. After five months of treatment the patient remained well.

DCM is characterized by dilatation and impaired contraction of left ventricle or both ventricles. (1) In the present case DCM was associated with acute rheumatic fever (ARF). Such association is infrequently reported previously in the world literature though it has been reported with viral myocarditis. (2,3) The short term prognosis of myocarditis is usually good, but varies widely by cause. Those patients who initially recover might develop recurrent dilated cardiomyopathy and heart failure. (2) However in end stage dilated cardiomyopathy with clinically unsuspected acute rheumatic carditis, it can have a fatal outcome. (3) The diagnosis of isolated rheumatic fever was considered in our patient because of finding of very high anti-streptolysin O titre and lack of evidence of either viral disease, infection with group C and G streptococci or other cause of spuriously high titer of antistreptolysin O. (4)

Thus to conclude, the association between dilated cardiomyopathy and rheumatic fever may be more prevalent than recognized and further study into the association and the responsible pathogenic mechanism is warranted.

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