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Myocarditis revisited: Few unusual cases of myocarditis - experience in an Indian tertiary care center

Debadatta Mukhopadhyay, Manoj Kumar Das, Shibarjun Ghosh, Santanu Guha and Tridib Kumar Banerjee Kolkata Medical College, India

Introduction: Myocarditis is a known complication of various febrile illnesses of infective and non-infective etiology. Here we describe some atypical causes of myocarditis, their clinical profile and outcome.

Case 1: A two-year-old girl presented with low grade fever and respiratory distress for three days. Significant clinical findings were cardiomegaly, gallop rhythm and tender hepatomegaly. Diuretics and inotropes as Dobutamine and Milrinone were commenced. Echocardiography revealed gross dilatation of LV and severe systolic dysfunction (EF 31%). There was some improvement with addition of Levosimendan. The inflammatory markers as ESR, CRP were raised as was CPK-MB. There was a strikingly high Eosinophil count (36% of Total WBC count of 16,800, Absolute Eosinophil count=f 6048/ cc). Serum IgE levels were very high, normal Thyroid profile and low Vitamin D levels. Bone marrow examination revealed hypercellular marrow with increased eosinophilic precursors. IPT and CG were normal. The child was diagnosed as a case of Idiopathic Hypereosinophilic syndrome and pulse dose methylprednisolone was started. Absolute eosinophil counts dramatically reduced to 288 after 10 days. There was also improvement of cardiac function (EF-42%). On follow up, LV dilatation and mild to moderate dysfunction persisted.

Case 2: A five month old child was brought to the A and E with incessant crying. She had tachycardia (HR 198/min, sinus rhythm), High BP (97th centile) and cardiomegaly. She had been bitten by a scorpion two hour back. There was LV dilatation and severe cardiac systolic dysfunction (EF 33%). CPK MB and Trop T levels were raised as were the inflammatory markers like ESR and CRP. The tachycardia and hypertension settled gradually after starting oral Prazosin and intravenous Labetalol infusion. After few days the cardiac function improved and normalized on follow up with cardiac chambers resuming their normal size.

Case 3: Myocarditis is a known complication of dengue fever in the tropical countries, characterized by LV dilatation and dysfunction. A six year old boy presented with shock with history of fever for last five days. Patient received adequate fluids and inotropes including Milrinone and Levosimendan. Later, IVIg was also given which led to marked improvement in function. There was Leukocytosis, thrombocytopenia and Dengue serology (IgM and IgG) was positive. In addition to severe systolic dysfunction (EF 33%), pericardial effusion, echocardiography also showed unusual hypertrophy of the interventricular septum (IVSd 1.3 cm: >4 z scores, LVPWd=1 cm, >4 z scores). On D6 PICU stay, LV Ejection fraction was found to have significantly increased to 60%.

Case 4: A four year old girl, admitted with pyrexia of unknown origin went into cardiogenic shock on the third day of admission. The IVC was dilated and not collapsing with respiration, there was global hypokinesia with LV and LA enlargement. All infective parameters were negative, except for the Scrub typhus serology (rising titre of OX2, OX 19, OXK and IgM). There was marked improvement in function after commencing treatment with Doxycycline and fever abated. On follow up of 6 weeks the cardiac function as well as chamber size normalized. There were no significant ECG changes in all four cases and in three cases the function was normal on follow up.

Biography

Debadatta Mukhopadhyay has completed her MBBS with Honors from Kolkata Medical College After completing her DCH from Institute of Child Health, Kolkata, she has completed her MD and then MRCPCH. She has trained in Pediatric Intensive Care and is also a BPICC Instructor. She has trained in Pediatric Cardiology in RN Tagore International Institute of Cardiac Sciences, Kolkata and as Fellow Pediatric Cardiology at University Hospital, Southampton, UK. Currently, she is working as an Assistant Professor of Pediatrics, Medical College, Kolkata, India where she also runs pediatric cardiology services. Her special interests are complex congenital heart diseases and fetal echo.

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amma_debadatta@yahoo.com