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Myocarditis - Case Report

Yasmeen Akhtar, M. Aslam, Waqar Hussain
Department of Paediatrics, Shaikh Zayed Hospital, Lahore.

SUMMARY

The causes of myocarditis are numerous, however the most common association is with an antecedent viral syndrome. We report a case of myocarditis and encephalitis in a 17 month old child who had faberile illness seven days prior to development of bradycardia, arrythmias, facial asymmetry and left sided weakness of body.

INTRODUCTION

Myocarditis is an uncommon disease that is characterized by inflammation of myocardium[1]. Often the condition is silent causing few or non specific symptoms and goes away on its own with full recovery, rarely a child may develop arrythmias, heart block and may go into failure.

CASE REPORT

A seventeen months old male child was admitted to pediatric unit of Sheikh Zayed Hospital with complaints of vomiting for one day. He was afebrile on admissionbut seven days prior to this illness he had high-grade fever, which lasted for three days. The patient kept on vomiting despite restricted oral feed, IV fluids and antiemetics. On the second day of admission he developed weakness of legs, facial asymmetry and irritability. He became drowsy on the third day of admission. He was shifted to ICU where on fifth day of admission he developed complaints of bradycradia and arrythmias.

On examination he was conscious and afebrile but had left sided facial palsy (UNM Type) and left sided hemiplegia with reduced tone and depressed reflexes and power of grade 2/6. Planter was up going on left side. In addition maculopapular rash was noticed on the body. He had cervical lymphadenopathy and heptomegaly of 3.5 cm. Fundoscopy was normal. He was having breadycardia and irregular rhythm of heart.

Investigations revealed normal CBC, serum electrolytes bleeding and clotting profile. LFT's showed some elevation of AST and ALT but serum ammonia and normal ultrasound of abdomen were normal. HBsAg and anti HCV were negative. C.T. Scan of brain revealed frank infarction in territory of right middle cerebral artery favoring probability of encephalites. ECG showed 2nd degree heart block going into complete dissociation. X-ray chest was normal but cardiac enzymes were raised. Echocardiography revealed structurally normal heart with paradoxical sepatal motion and hypokinetic interventricular septum. The final diagnosis was viral encephalitis with right-sided cerebral infarct and septal myocarditis with 2nd degree heart block. The possibility of post viral systemic vasculitis could not be ruled out.

Patient was put on continuous monitoring and restricted IV fluids. Injection omnipen, cefotaxime, zovirax and decadron were started. The cardialogist advised to start injection atropine if heart rate dropped below 60 and the patient became unstable. Aspirin and pacemaker were other possibilities offered. Injection aminophylline was started and injections of immunoglobulins were also given for 5 days.

The course of illness was such that patient started improving on this therapy. He remained admitted in ICU for 22 day. On discharge he was conscious, alert moving all four limbs with normal tone and power. There was no facial asymmetry. Rate and rhythm of heart were also normal. He was discharged on advice of regular follow up and on tapering doses of theophylline, decadron and asprine. Four weeks after discharge he was free of all medication.

DICUSSION

Myocarditis is characterized by inflammation of myocardium. It is an uncommon disease and majority of cases are sub clinical so the exact incidence is unclear. Male to female ratio is 1:1.5[1].

Antecedent viral syndrome has been documented in 60 percent of patients with myocardiris. Enterovirus group [Coxsakie B virus] accounts for as many as 50 percent of cases. Typical time interval is 1-2 weeks as noted in this case[1].

Pediatric patients usually present with non-specific symptoms. Fever is documented in only 20 percent of cases, the reported patient was also afebrile throughout his illness . Other symptoms include respiratory distress, poor feedings and cyanosis. The Patient is usually nontoxic and has tachycardia & tachypnea but bradycardia may occur especially with heart block as was seen in this case[2]. More acutely ill patients may develop arrythmias and may go into heart failure[2].

While investigating such patients leucocytosis has been noted in only 25 percent of patients. It was also normal in this patient. ESR is raised in 60 percent of patients. Cardiac size is usually normal unless there is associated pericarditis or patient has dilated cardiomyopathy and heart failure. Cardiac enzymes may be raised as noted in this patient. In ECG only 20% of patients have conduction delay, including Mobitz type1 and type 2. Complete heart block may also occur. Echocardiography may show ventricular dysfunction with reduced ejection fraction and segmental wall motion abnormalities. Viral isolation is possible by PCR identification of viral infection in myocardium, pericardial fluid and other body fluids. Myocardial biopsy which is definite diagnosis is characterized by interstitial mononuclear cell infiltrate with attendant myocyte necrosis. However only 30 percent of patients have positive biopsy[3]

Standard treatment is cardiac monitoring and detection of arrythmias and heart blocks as was done in this case. Bed rest and restriction of activities is also important. Anticoagulants can be used to decrease the risk of thromboembolic complications[4]. Role of immunosuppression with corticosteroids and cyclosporion is controversial[5]. Antibiotics can be prescribed if any suspicion of bacterial infection is present. Patients with Mobitz type 2 or complete heart block may need pacemaker as was an option in this case. Prognosis is usually good with full recovery as observed in this patient. Rarely myocarditis is fulminant enough to lead to death. Dilated cardiomyopathy secondary to myocardial damage is also rare[4].

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The Authors:

Yasmeen Akhtar
Trainee Registrar
Department of Paediatrics,
Shaikh Zayed Hospital,
Lahore.

M. Aslam
Senior Registrar
Department of Paediatrics,
Shaikh Zayed Hospital,
Lahore.

Waqar Hussain
Associate Professor
Department of Paediatrics,
Shaikh Zayed Hospital,
Lahore.

Address for Correspondence:

Waqar Hussain
Associate Professor
Department of Paediatrics,
Shaikh Zayed Hospital, Lahore.