**AN ERRATIC HEARTBEAT – A CASE OF SUPRAVENTRICULAR TACHYCARDIA AS A COMPLICATION OF MYOCARDITIS IN A PAEDITRIC PATIENT**

Muhamad Arham Bin Md Ali1, Kevin Wong Chuing Shen1, Norhaya binti Abdullah1

*1Emergency and Trauma Department, Hospital Pakar Sultanah Fatimah, Muar, Johor, Malaysia*

|  |
| --- |
| INTRODUCTION: Myocarditis is a clinical challenge with potentially life-threatening complications in children. We present a case of myocarditis in a child who presented with supraventricular tachycardia (SVT).  CASE REPORT: A 3-year-old girl presented with fever, cough, and vomiting for one week. She developed facial puffiness and leg swelling on day 5 of illness. In the emergency department, she was tachycardic with a heart rate of 242 bpm, blood pressure of 108/60 mmHg, and oxygen saturation of 100%. Systemic examination revealed gallop rhythm, displaced apex beat, reduced air entry at bilateral lungs’ lower zones, and hepatomegaly. Her electrocardiogram (ECG) showed regular narrow complex tachycardia without P waves. A trial of ice pack over her forehead and Valsalva manoeuvre were unsuccessful. After 2 doses of adenosine, she reverted to sinus rhythm with a heart rate of 125 bpm and QTc of 0.4 seconds. She was admitted to the paediatric high-dependency unit. Her cardiac biomarkers were elevated. Her echocardiography revealed an ejection fraction of 47% with all the chambers dilated. The patient was started on diuretics and propranolol. She was discharged after 11 days of hospitalisation  DISCUSSION: SVT is the most common arrhythmia in children and it is rarely life-threatening. However, in this case, SVT was the complication of acute myocarditis. The clinical presentation of myocarditis can range from asymptomatic to critically ill. ECG changes in myocarditis are usually non-specific and only 17.5% had sustained tachyarrhythmias. Initial management of myocarditis focuses on the management of arrhythmia and heart failure. Definitive treatment depends on the cause of myocarditis. The most common aetiology of acute myocarditis is viral infections, but in this patient her viral screening was negative. Although myocardial damage is contributed by viral-mediated myocyte injury and the host’s immune response, there is insufficient evidence to support the use of immunotherapy in myocarditis. In cases of fulminant myocarditis, patients may require extracorporeal life support.  CONCLUSION: Clinicians should have a high index of suspicion of other pathologies when a child presents with SVT. Early detection and aggressive treatment of myocarditis improve the prognosis and prevent progression into dilated cardiomyopathy. |

KEYWORDS: Myocarditis, paediatric, supraventricular tachycardia.