ACUTE MYOCARDITIS IN A DUCHENNE MUSCULAR DYSTROPHY (DMD) PATIENT

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BACKGROUND

- DMD is a progressive muscular dystrophy caused by an X linked recessive mutation of the dystrophin gene.
- Cardiovascular disease has been leading cause of death especially with improvement in overall care of DMD patients.
- This case highlights a unique presentation of myocarditis that can mimic myocardial infarction (MI) in DMD patients.

CASE PRESENTATION

- 6-year-old male with DMD presented to local ER with acute chest pain in setting of elevated high sensitivity troponin levels of 2,875ng/L.
- Initial ECG obtained (Figure 1)
- Heparin bolus and aspirin was administered due to concern for acute MI

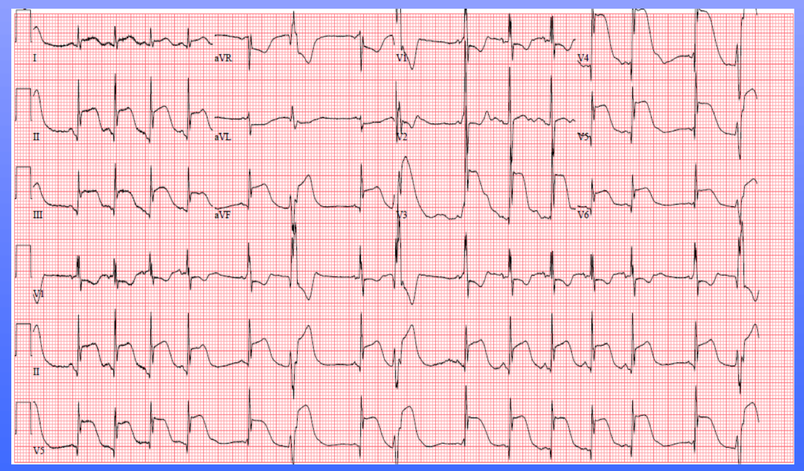

Figure 1. ST elevations in the inferior limb and lateral precordial leads with reciprocal ST depression in anterior leads

WORKUP AND MANAGEMENT

- WBC 12.88/uL, K 2.9 mmol/L, ALT 683 U/L, AST 581 U/L, ALP 127 U/L
- Repeat high sensitivity troponin: 7,041 ng/L
- CXR: unremarkable
- Normal LVEF without any regional wall motion abnormalities
- Myocarditis was highest on the differential due to improvement of chest pain, lack of regional wall motion abnormalities.
- Cardiac CT/cath deferred following consultation with cardiomyopathy team due to prior reports of similar presentation in DMD patients.
- Transferred to ICU, started on IV Methylprednisolone 2 mg/kg/day BID and given total of five doses, resulted in downtrend of troponin and symptomatic relief of chest pain (Figure 2)

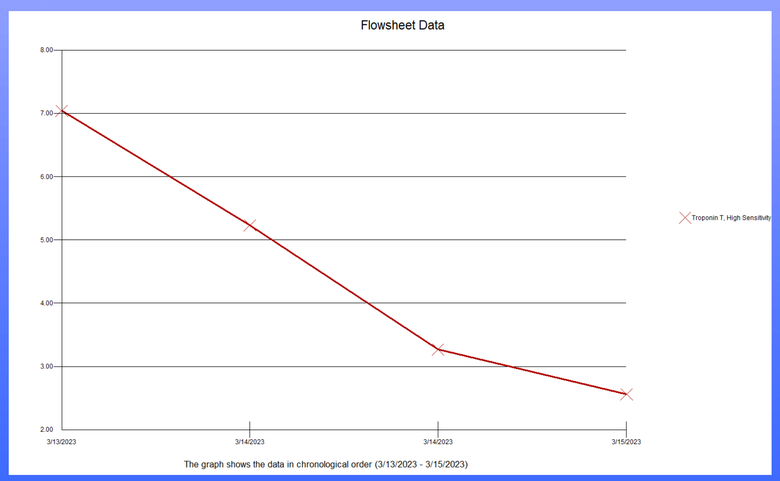

Figure 2. Troponin downtrend on steroids

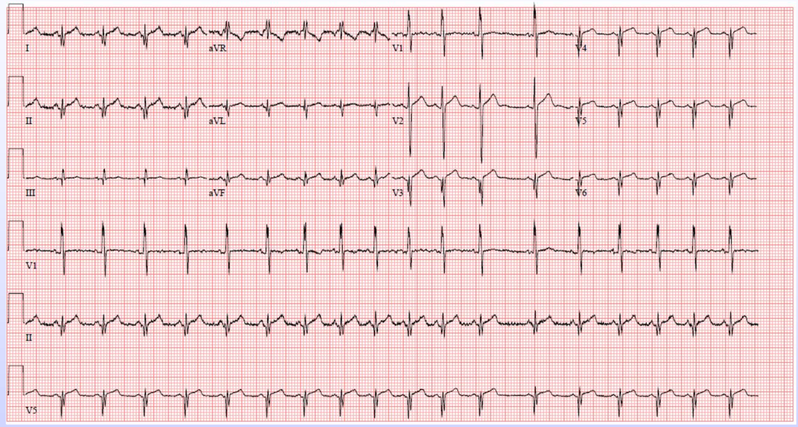

Figure 3. Normal sinus rhythm with sinus arrythmia

DISCHARGE FOLLOW UP

- Patient transitioned to oral prednisone taper prior to discharge with plans to wean off as outpatient.
- ACE inhibitor and spironolactone started to decelerate progression of cardiomyopathy
- ECG prior to discharge (Figure 3)
- Activity restriction recommended for at least 3-6 months

CONCLUSION

- Myocarditis in DMD patients can present with ECG changes that can mimic acute MI.
- Timely recognition is imperative in order to initiate appropriate treatment and decelerate progression to cardiomyopathy.