

## **Atypical presentation of Coxsackie B induced viral myocarditis**

### **Introduction:**

Myocarditis is a disease with a variable clinical presentation, ranging from asymptomatic to a fatal outcome. We present this case of a 51 year old male who had a non-specific initial presentation of a viral prodrome and was eventually found to have new onset cardiomyopathy secondary to coxsackie B infection.

### **Case Presentation:**

51-year-old man with a history of hypertension presented with 4 days of fevers, chills, diarrhea, fatigue, and loss of appetite. Initial vital signs included a fever of 102.9 F and tachycardia of 115 beats/min. Laboratory testing was significant for elevated alkaline phosphatase 325IU/L, AST 347IU/L, ALT 617IU/L, total bilirubin 1.4mg/dL. A CBC was within normal limits but ferritin was 2,043ng/mL, ESR 83mm/hr and CRP 30.5mg/dL. Initial exam did not reveal any abnormalities while a CT abdomen showed possible enteritis and mild upper retroperitoneal adenopathy.

The patient was started on broad spectrum antibiotics for treatment of sepsis of unclear etiology. He continued to have persistent fevers and extensive work up was done for infectious, hematologic, and autoimmune causes. Infectious workup included negative blood cultures, urinalysis, respiratory viral panel, GI pathogen panel, C. difficile, tick-borne serologies and blood parasite smear. There was also concern for viral myocarditis due to new onset cardiomyopathy revealing an ejection fraction of 47% with abnormal septal motion. Viral testing for human herpes virus 6, coxsackie and parvovirus B12 were pending.

Testing was negative for hematological causes including hemophagocytic lymphohistiocytosis, lymphoma and multiple myeloma. Further blood work revealed a weakly positive ANA 1:80 but negative SS-A, SS-B, anti-smooth muscle, anti-double-stranded DNA and rheumatoid factor.

His fevers eventually resolved spontaneously. Daily clinical improvements were seen and the patient was eventually discharged without a clear diagnosis for his fever of unknown origin. However, testing for coxsackie B antibody eventually returned positive confirming the diagnosis.

### **Discussion:**

Myopericarditis secondary to Coxsackie viruses has been reported often, however multi-organ involvement is rare. Although the mechanism is not clearly understood, it is thought to involve direct viral cytotoxicity as well as immune-mediated damage. A high index of suspicion is warranted for viral as well as tick borne causes of myopericarditis.