

## Introduction

- Myocarditis is defined as an inflammation of the heart muscles by the activation of multiple receptors causing cytotoxic effects.
- While viruses are the most common identifiable cause of acute myocarditis, extremely rare cases were caused by insects and snake bites.
- In our discussion, we will describe the first reported case of irreversible myocarditis caused by a Black Widow Spider.

## Case Report

- 52 year old previously healthy gentleman presented to our Emergency Department (ED) for 1 week duration of shortness of breath, orthopnea, diaphoresis and palpitations.
- The patient was bit in Erbil, Iraq by a “small black spider” (fig 1) one month prior to presentation.



fig 1

- 2 days after the bite, he noticed increased redness and irritation around the bite (fig 2).
- He sought medical advice and the bite site was manipulated in an attempt to drain it causing it to develop a bullae after another 2 days (fig 3).
- The bullae was drained and debrided the same week (fig 4).



fig 2

fig 3

fig 4

The patient was admitted and had a cardiac MRI (fig 5) and echocardiography showing acute myocarditis and an ejection fraction of 45% that remained the same 4 months later.

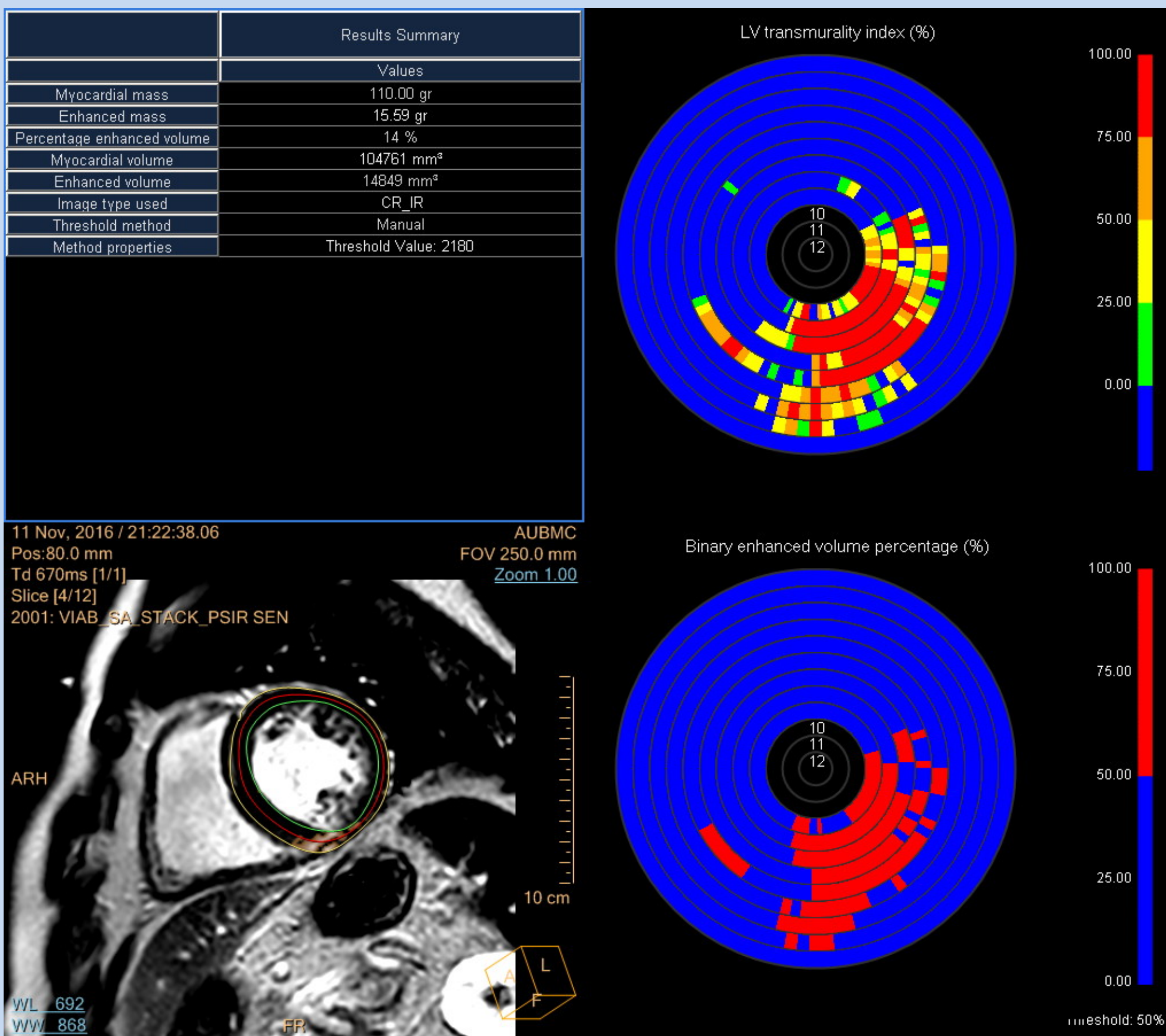


fig 5

## Case Discussion

- The Black Widow Spider (BWS) is found commonly all over the world, and is generally found in the Mediterranean basin.
- The most common symptoms of BWS bite include diaphoresis, local papule, abdominal pain and muscle fasciculations.
- Myocarditis is extremely rare and it was always described as reversible.
- An accurate diagnosis of myocarditis is difficult. Even though an endomyocardial biopsy is reliable, one cannot justify doing it for all patients with a myocarditis on the differential.
- Cardiac magnetic resonance is the method of choice of diagnosing myocarditis.

## Conclusion

- We described the first case of irreversible myocarditis after a BWS bite
- BWS is common in the MENA region and myocarditis can be a rare complication.
- BWS bites have a large spectrum of manifestations, ranging from benign localized complications to systemic and even fatal outcomes.

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