

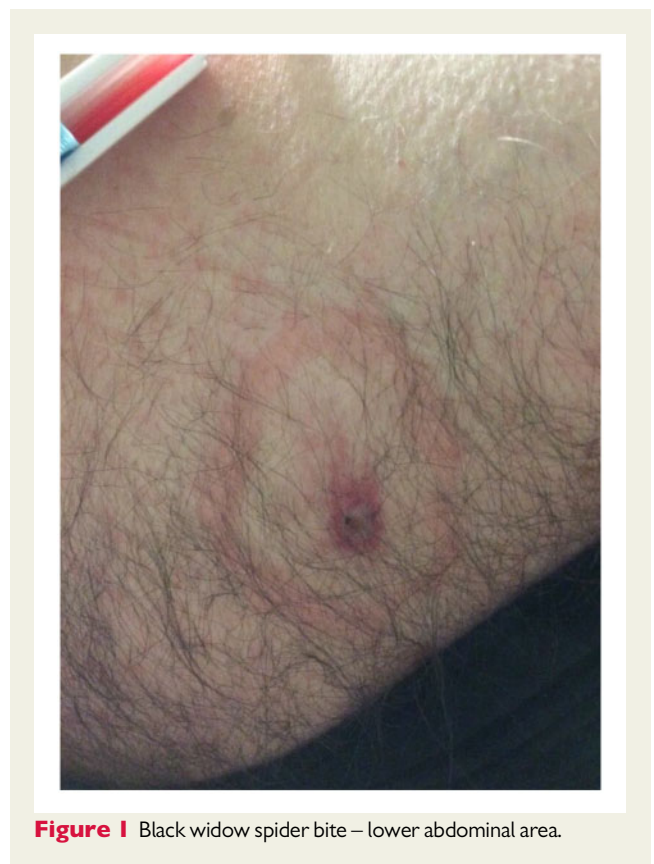
# Acute myocardial injury caused by black widow spider (*Latrodectus*) bite

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Received 1 February 2020; first decision 17 February 2020; accepted 12 March 2020; online publish-ahead-of-print 24 April 2020

A 40-year-old male presented to the emergency department due to multiple black widow spider bites mainly located in the abdominal and lumbar area (Figure 1). Patient's medical history included deep venous thrombosis 3 years ago now on treatment with aspirin 100 mg od, smoking and positive family history of premature coronary artery disease. On admission the patient was haemodynamically stable, conscious, with no focal neurological findings, had mild facial oedema and fever up to 38°C. The patient denied chest pain or dyspnoea. The laboratory workup showed leucocytosis and elevated troponin [cardiac troponin I (cTnI): 0.9 ng/mL; normal range <0.1 ng/mL]. The electrocardiogram (ECG) revealed no signs of acute myocardial ischaemia and a transthoracic echocardiogram showed no regional wall motion abnormalities. The patient was treated with intravenous methylprednisolone, paracetamol, ampicillin/sulbactam, dimetindene, and diazepam. He was followed up in the cardiology ward for 48 h. No ECG changes were noted and a gradual decrease in troponin levels was observed. Due to the patient's risk factors, a coronary angiogram was performed revealing normal coronary arteries (Figure 2). The patient refused to have a cardiac magnetic resonance imaging (MRI) due to claustrophobia. Latrodectism is a clinical syndrome presenting after black widow spider bite due to the release of the neurotoxin  $\alpha$ -latrotoxin. This protein leads to the release of neurotransmitters, such as acetylcholine, norepinephrine, and gamma-aminobutyric acid. The main clinical manifestations include local pain, facial muscle spasms, headache, abdominal pain, nausea and vomiting, rhabdomyolysis, facial oedema, perspiration, and rarely death. Acute myocardial injury is extremely rare and may occur through either direct myocardial toxicity or due to the excretion of catecholamines and cytokines.<sup>1</sup> Most cases with myocardial involvement have been described in the Mediterranean region and have an uneventful recovery. Serious complications, however, may occur.<sup>2,3</sup> Clinicians should be alert when facing a black widow spider's bite for occult myocardial injury.



**Figure 1** Black widow spider bite – lower abdominal area.

**Consent:** The author/s confirm that written consent for submission and publication of this case report including image(s) and associated text has been obtained from the patient in line with COPE guidance.

**Conflict of interest:** none declared.

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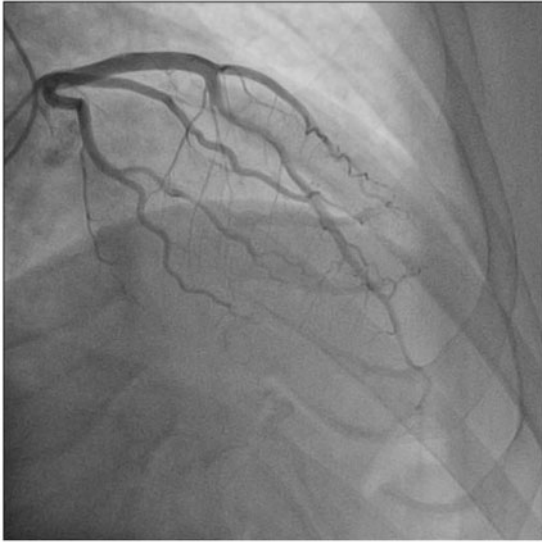
† All authors have contributed equally to the management of the patient, collection of data, and writing of the manuscript.

Handling Editor: Tina Khan

Peer-reviewers: Monika Arzanauskaitė and Zahra Raisi Estabragh

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**Figure 2** Right anterior oblique (RAO) view showing normal left coronary artery anatomy.

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