# False aneurysm in a Charcot foot. Report of a case

Aymen Ben Fredj<sup>1</sup>, Fourat Farhat<sup>1</sup>, and Hedi Rbai<sup>1</sup>

<sup>1</sup>Université de Sousse Faculté de Médecine de Sousse

March 29, 2022

## Abstract

Charcot foot or neurogenic osteoarthropathy, is a serious complication of diabetic peripheral neuropathy. The association between false aneurysm and Charcot foot is yet uncommon, and has not been reported through the literature. We describe a case of false aneurysm in a Charcot foot in a 55-year-old patient.

#### Title page

Title : False aneurysm in a Charcot foot. Report of a case

Authors : Ben Fredj  $A_1$ , Farhat F1, Rbai  $H_1$ 

#### Affiliations :

 $_1 {\rm Orthopaedics}$ Department, Ibn El Jazzar Hospital, Université de Sousse Faculté de Médecine de Sousse, Sousse, Tunisia

#### Author contributions

Aymen Ben Fredj : contributed to writing and editing of the manuscript.

Fourat Farhat: contributed to the conceptualization of the manuscript.

Hedi Rbai: contributed to supervision and validation.

**Corresponding author:** Dr Ben Fredj Aymen, address: Orthopaedics Department, Ibn El Jazzar Hospital, Université de Sousse Faculté de Médecine de Sousse, Sousse, Tunisia

# Email address: aymen. ben. fredj@gmail.com; Telephone number :0021620357575

A written informed consent was obtained from the patient to publish this report in accordance

with the journal's patient consent policy

Title: False aneurysm in a Charcot foot. Report of a case

#### Abstract

Charcot foot or neurogenic osteoarthropathy, is a serious complication of diabetic peripheral neuropathy. The association between false aneurysm and Charcot foot is yet uncommon, and has not been reported through the literature. We describe a case of false aneurysm in a Charcot foot in a 55-year-old patient.

# Clinical case

A 55-year-old patient, suffering from insulin-dependent diabetes for 10 years with suboptimal diabetic balance, and with no history of surgery, was admitted to our orthopaedic department for a non-painful swelling on the dorsum of the right foot evolving for 3 months. Physical examination revealed a non-hot pulsatile swelling of a very deformed right foot with radiographic signs of osteoarticular destruction (Figure 1A, 1B).

Regarding the pulsating nature of the swelling, we performed an arteriography that showed a false aneurysm of the dorsal pedal artery in relation to the anterior aspect of the ankle (Figure 2A). The False aneurysm was treated by embolization (Figure 2B).

Only 33 cases of foot and ankle false aneurysms have been reported.<sup>1</sup> The causes were related to orthopedic foot surgery or ankle sprain. The occurrence of false aneurysm in our case could be explained by low-energy strain injuries resulting from skeletal abnormalities of the Charcot foot.<sup>2</sup>

The hypothesis of false arterial aneurysm must be part of the diagnoses to be evoked among infectious or tumoral etiologies because manipulating these false aneurysms surgically can lead to significant bleeding that is difficult to control.

Acknowledgments: None

Conflict of interest: None

Keywords: false aneurysm, Charcot foot

**Funding:** This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Data availability Statement: not applicable

**Ethics statement:** This clinical image is the authors' own original work, which has not been previously published elsewhere

## **References:**

Yu JL, Ho E, Wines AP. Pseudoaneurysms around the foot and ankle: case report and literature review. Foot Ankle Surg. 2013;19(3):194-198.

Trieb K. The Charcot foot: pathophysiology, diagnosis and classification. Bone Joint J. 2016; 98(9):1155-1159.



