

# Neglected foreign body in the foot of a patient with severe diabetic neuropathy

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Accepted 8 May 2020

## DESCRIPTION

A 72-year-old woman, with diabetes mellitus of 35 years duration, on premixed insulin and oral anti-diabetic medications, presented to endocrinology out-patient department (OPD) with 3-week history of worsening swelling and erythema of the left great toe. She did not recall any trauma or injury to the toe prior to the onset of the symptoms. She had a history of barefoot walking. She had received 1 week of oral antibiotics prior to her presentation to our centre.

On examination, she was afebrile and inspection of the left great toe showed significant swelling and a wound of 0.5×0.5 cm on the plantar aspect with pus discharge. She could not perceive pressure sensation of 10g of monofilament; her vibration perception threshold as measured with a biothesiometer was 45 V in both feet, indicating bilateral severe distal symmetric polyneuropathy. Laboratory investigations showed a glycated haemoglobin of 7.2%, haemoglobin of 124 g/L (N: 120–150 g/L), white cell count of  $13.2 \times 10^9/L$  and erythrocyte sedimentation rate of 66 mm/hour.

She was started on intravenous amoxicillin-clavulanic acid for cellulitis. Insulin and oral anti-diabetic medications were continued for glycaemic control. Daily saline dressings were done for her foot ulcer. However, even after 1 week of inpatient treatment, there was no significant improvement. A plain radiograph of her left foot was obtained and this showed an impacted foreign body (possibly an impacted stone) over the medial aspect of the distal phalanx of the left great toe. The stone fragment was surgically removed. Radiograph of the left foot

## Learning points

- ▶ Patients with severe diabetic neuropathy may not recognise trauma or injury; hence, an impacted foreign body should be considered in these patients with cellulitis.
- ▶ An early X-ray may be a useful screening tool.
- ▶ Treatment of these patients should include surgical removal of impacted foreign body, good glycaemic control and antibiotics.

before and after stone removal is shown in [figure 1](#). All signs of inflammation settled following another 1 week of intravenous antibiotics.

Injuries involving foreign bodies in the foot are common. There is paucity of reported cases of foreign body retention in patients with diabetes. Majority of available literature pertain to impacted insulin needle fragments.<sup>1</sup> Retained foreign bodies carry several potential complications including infections, pain, stiffness and granuloma formation.<sup>2</sup> In this patient with no history of trauma or injury, the initial diagnosis was cellulitis. The decision to obtain plain radiograph of the affected area was prompted by persistent symptoms following a course of antibiotics, thus raising a suspicion of an alternate diagnosis (such as osteomyelitis). The initial index of suspicion should be high, especially in patients with diabetic neuropathy. Bare foot walking should be avoided and all patients with diabetic neuropathy should be taught about appropriate foot wear and foot care measures.<sup>3</sup>

**Contributors** KG and KEC wrote the manuscript. FKJ and TVP reviewed the manuscript. All authors finally approved the manuscript.

**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient consent for publication** Obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

## REFERENCES

- 1 Nadig SN, Deibler AR, Marlow T, *et al*. Retained needle fragments in patients with diabetic neuropathy. *JAMA* 2000;283:3072.
- 2 Lammers R. Soft tissue foreign bodies. *Ann Emerg Med* 1988;17:1336–47.
- 3 Lipsky BA, Aragón-Sánchez J, Diggle M, *et al*. IWGDF guidance on the diagnosis and management of foot infections in persons with diabetes. *Diabetes Metab Res Rev* 2016;32:45–74.



**Figure 1** Impacted stone in left foot before (left panel) and after (right panel) removal.



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**To cite:** George K, Cherian KE, Jebasingh FK, *et al*. *BMJ Case Rep* 2020;13:e235983. doi:10.1136/bcr-2020-235983

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