

# Open dislocation of the interphalangeal joint associated with running barefoot

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Accepted 10 April 2016

## DESCRIPTION

A 25-year-old fit healthy man with a body mass index of 25 kg/m<sup>2</sup> and no connective tissue disorder, attended our emergency department with an open dislocation of the interphalangeal joint of the hallux. He had been performing warm-up sprints on a textured artificial surface (figure 1) by running the width of the gym repeatedly. While making a turn he experienced severe pain and realised he had sustained an injury (figure 1). The valgus deformity was reduced at the gym and the patient transferred to hospital.

Plain radiographs demonstrated no bony injury, and clinical examination revealed no damage to neurovascular structures. An orthopaedic consultation was obtained and advice given to wash out the joint and suture the wound closed under local anaesthesia. A plaster back slab was applied and broad-spectrum antibiotics given. The patient made a good functional and cosmetic recovery (figure 2). Eighteen months later, the toe was pain free, and only had a slightly reduced range of motion with loss of 15° of flexion.

One well-recognised repeated strain injury of the hallux is 'turf toe', which results in pain and impaired function due to hyperextension of the metatarsophalangeal joint.<sup>1</sup> This patient, however, sustained a more severe injury, and appears to have generated enough shearing stress to disrupt the joint capsule and overlying skin, resulting in an open dislocation. A lack of protective footwear and

friction associated with the textured floor surface were felt to be contributory.



**Figure 2** Appearance of toe 4 months post repair.



**Figure 1** Appearance of toe at time of injury, with textured flooring surface in background.

## Learning points

- ▶ Serious open joint injuries can occur, rarely, due to patient-generated forces.
- ▶ Protective footwear is advisable for rapid sprinting and sharp turning.
- ▶ Such injuries may be managed on an outpatient basis and without the need for a general anaesthetic.

**Acknowledgements** The authors would like to thank Georgina Nairne, at the Royal Surrey County Hospital, UK, for the medical photography.

**Competing interests** None declared.

**Patient consent** Obtained.

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

## REFERENCE

- 1 Drakos MC, Fiore R, Murphy C, *et al.* Plantar-plate disruptions: "the severe turf-toe injury." Three cases in contact athletes. *J Athl Train* 2015;50:553–60.



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**To cite:** Schneider HJ, Kanji R. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2016-214972

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