

A case of the total talus dislocation

Osamu Nomura MD^{1,2} | Ryoji Muraio MD² | Hiroshi Kitahara MD²

¹Department of Pediatric Emergency and Critical Care Medicine, Division of Pediatric Emergency Medicine, Tokyo Metropolitan Children's Medical Center, Fuchu-city, Tokyo, Japan

²Department of Emergency Medicine, Shonanfujisawa Tokushukai Hospital, Fujisawa-city, Kanagawa, Japan

Correspondence

Osamu Nomura, Division of Pediatric Emergency Medicine, Tokyo Metropolitan Children's Medical Center, Fuchu-city, Tokyo, Japan.

Email: osamunomura@hotmail.com

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1 | CASE

A healthy 59-year-old man was brought to the emergency room complaining of severe pain in his left ankle after falling down a flight of stairs. He suffered an ankle deformity but the overlying skin was intact (Figure 1). AP X-ray (Figure 2A) showed dislocation of the talus from the tibiotalar joints and fragmentation of the talar head. From the lateral view (Figure 2B), the subtalar and talonavicular joints were not clearly observable. These findings indicated that the talus dislocated anterolaterally from the tibiotalar, subtalar, and talonavicular joints (ie. total talus dislocation). In addition, the presence of a comminuted fracture of the talus was suspected, suggesting the likelihood of a closed total talar dislocation (TTD) with an accompanying comminuted fracture of the talus, as later confirmed by CT (Figure 3).

In TTD, the dislocation of the talus from the tibiotalar, subtalar, and talonavicular joints is commonly associated with malleolar or talar fractures. High-energy trauma, such as a fall from a height or a motor vehicle accident, is a common cause.¹ TTD is considered to be the result of maximum pronation or supination coupled with plantar flexion force. Treatment of TTD is controversial and varies according to the extent of the injury. Several authors have reported a favorable outcome using closed reduction of TTD without fractures.^{2,3} However, a systematic review including a total of 86 TTD cases reported that 32 had a concomitant fracture of the talus requiring open surgery for fracture fixation. The review showed that a good outcome was achieved in only 35% of cases and avascular necrosis was relatively common (26%) as a complication. An open type of dislocation and/or accompanying fracture is considered to be a risk factor with the possibility of an unfavorable outcome.⁴

Taken together, we believe that confirming the presence of fractures by CT is critical in determining treatment strategy. In this case, an



FIGURE 1 Photograph of the left ankle and foot on arrival showing varus deformity and swelling

urgent closed reduction was successfully performed under general anesthesia using image guidance, and open fracture fixation was scheduled for the following day.

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A written informed consent was obtained from the patient.

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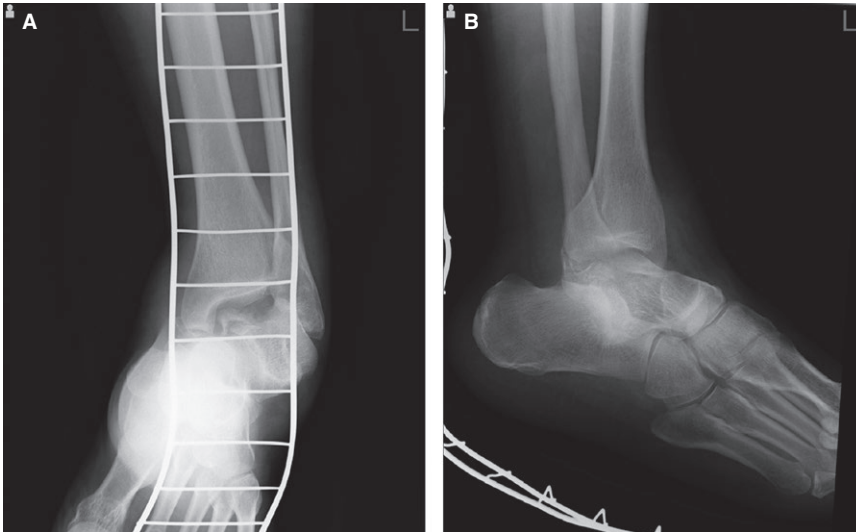


FIGURE 2 Anteroposterior (A) and lateral (B) X-rays taken shortly after arrival and prior to reduction



FIGURE 3 3D-CT performed in the ER showed total talar dislocation with comminuted fracture of the talus and fracture of distal fibula

CONFLICT OF INTEREST

The authors have stated explicitly that there are no conflicts of interest in connection with this article.

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