

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: <http://Elsevier.com/locate/radcr>

Musculoskeletal

Talar insufficiency fracture complicating ankle cheilectomy

Jing Luo MD, Felix S. Chew MD, Alice S. Ha MD*

Department of Radiology, University of Washington, Box 354755, 4245 Roosevelt Way NE, Seattle, WA 98105

ARTICLE INFO

Article history:

Received 27 June 2017

Accepted 11 September 2017

Available online

Keywords:

Ankle cheilectomy

Insufficiency fracture

Ankle impingement

ABSTRACT

Ankle cheilectomy as surgical treatment for anterior ankle impingement has high rates of procedural success and low rates of complications when performed before the onset of significant osteoarthritis. We present 3 patients who developed insufficiency fractures of the talar neck following cheilectomy for anterior ankle impingement. Due to the high risk of avascular necrosis associated with displaced talar neck fractures, the recognition of talar insufficiency fractures by the radiologist can aid in the timely diagnosis and initiation of intervention. Because radiographic findings of stress fractures often require weeks to manifest, maintaining a high index of suspicion in the postcheilectomy setting allows the radiologist to suggest appropriate further imaging when appropriate.

© 2017 the Authors. Published by Elsevier Inc. under copyright license from the University of Washington. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Introduction

Anterior ankle cheilectomy is a surgical procedure in which osteophytes are resected from the anterior margin of the tibiotalar joint for the treatment of anterior ankle impingement syndrome refractory to conservative management. Cheilectomies may proceed via an open or arthroscopic approach, and high rates of success have been reported for both approaches when surgery is performed before significant osteoarthritis has occurred [1,2]. Low complication rates are reported for ankle cheilectomy, and we were unable to find previous published cases of talar insufficiency fractures as complications of ankle cheilectomy. In this report, we present 3 patients who underwent ankle cheilectomies for anterior ankle impingement syndrome and subsequently developed talar

neck insufficiency fractures within 4-6 weeks after the initial surgery.

Cases

Case 1

A 45-year-old woman with a history of a previous gastrocnemius slide and Lapidus surgeries 1 year ago initially presented with symptoms of right anterior ankle impingement. The preoperative radiograph demonstrated a mild bony prominence at the dorsal talar neck (Fig. 1). The patient subsequently underwent an open right ankle anterior talar cheilectomy and hardware removal. After surgery, the patient was placed in a pneumatic walking boot with instructions to increase weight

Competing Interests: The authors have declared that no competing interests exist.

* Corresponding author.

E-mail address: aha1@uw.edu (A.S. Ha).

<https://doi.org/10.1016/j.radcr.2017.09.017>

1930-0433/© 2017 the Authors. Published by Elsevier Inc. under copyright license from the University of Washington. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

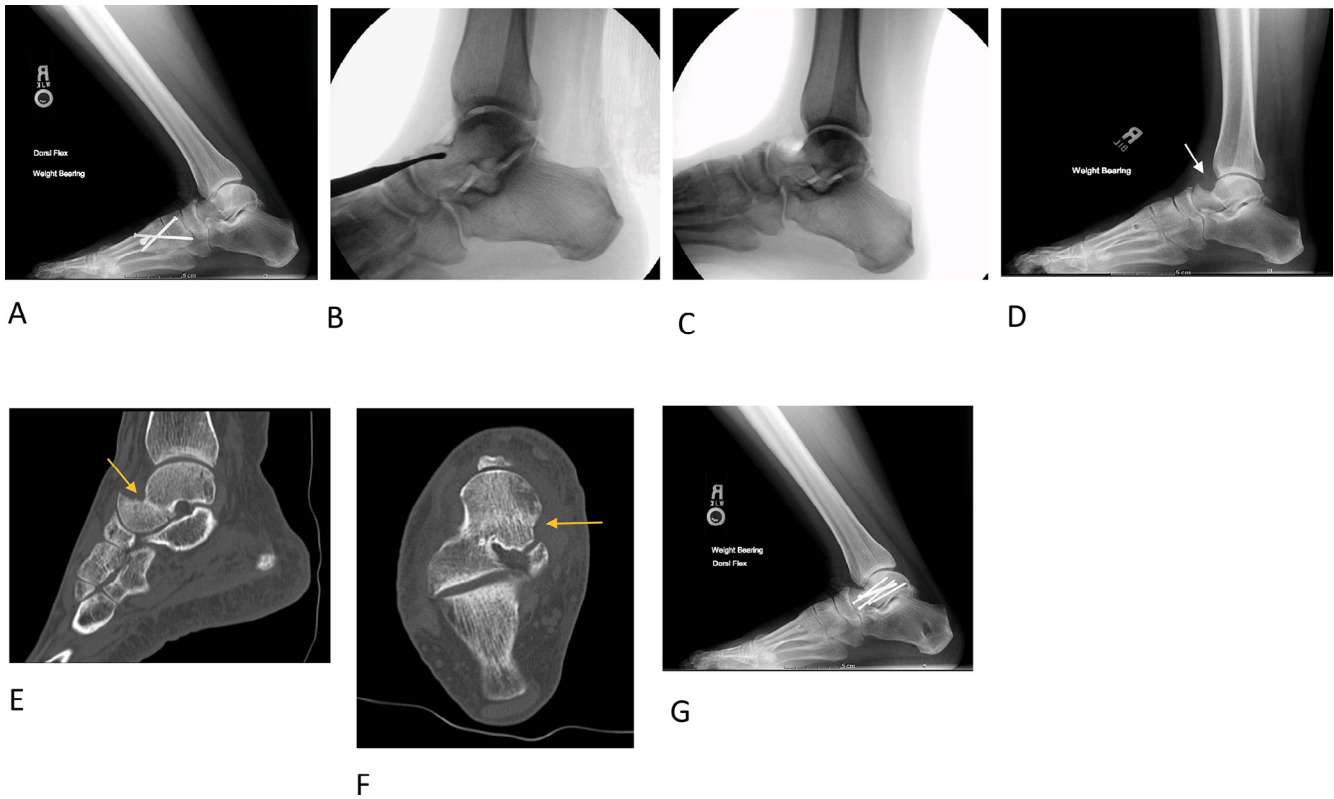


Fig. 1 – A 45-year-old woman with right ankle cheilectomy complicated by a talar neck insufficiency fracture. (A) The preoperative lateral radiograph of the ankle in dorsiflexion demonstrates surgical screws transfixing the first tarsometatarsal joints and the first 2 metatarsals from a prior Lapidus procedure for hallux valgus. There is no radiographic evidence of motion restriction. The patient subsequently underwent open ankle cheilectomy based on a clinical diagnosis of anterior ankle impingement and hardware removal (see the 2 intraoperative fluoroscopic images in B and C). (D) Lateral view of the radiograph of the right ankle 6 weeks after surgery demonstrates a sclerotic line below the talar cheilectomy site, concerning for a fracture. This was confirmed by computed tomography with sagittal (E) and axial (F) images demonstrating a sclerotic line at the talar neck extending from the site of prior talar cheilectomy to the middle facet of the subtalar joint, consistent with a subacute talar neck insufficiency fracture (arrows). The patient subsequently underwent open reduction and internal fixation of the talar neck fracture (G). In both E & F, the arrows are pointing to the sclerotic line at talar neck.

bearing and was weaned off the boot by week 3. During her clinical visit approximately 6 weeks after surgery, the patient complained of a generalized aching discomfort in the anterior aspect of the ankle. Radiography performed on the same day demonstrated linear sclerosis at the talar neck, concerning for a minimally displaced talar neck fracture, which was new compared with the prior radiography. Computed tomography (CT) was performed for further evaluation, which confirmed the minimally displaced fracture extending from the cheilectomy site to the middle facet of the subtalar joint. The patient subsequently underwent open reduction internal fixation (ORIF) of the left talar neck fracture with calcaneal bone graft.

Case 2

A 45-year-old man with a history of bilateral gastrocnemius slide surgeries for gastrocnemius equinus presented with symptoms of left anterior ankle impingement (Fig. 2). Preoperative radiographs demonstrated anterior a tibiotalar osteophytosis

and a bony prominence at the dorsal talar neck. The patient subsequently underwent left ankle cheilectomy. After surgery, the patient developed increased pain at the anterior ankle after initiating a more forceful ambulation in a boot. During the follow-up appointment 4 weeks after the initial surgery, the radiograph demonstrated a fracture through the talar neck, which was confirmed by CT performed on the same day. The patient subsequently underwent ORIF of the left talar neck fracture with calcaneal bone graft.

Case 3

A 55-year-old woman presented with symptoms of anterior ankle impingement including anterior ankle pain (Fig. 3). The preoperative radiograph demonstrated tibiotalar osteoarthritis and osteophytosis of the talar neck. The patient underwent right ankle cheilectomy. At the 6-week postoperative visit, the patient complained of 10/10 pain, worse with progressive weight bearing. The radiograph on the same day demonstrated a sclerotic line at the talar neck, concerning for a minimally displaced

Download English Version:

<https://daneshyari.com/en/article/8825215>

Download Persian Version:

<https://daneshyari.com/article/8825215>

[Daneshyari.com](https://daneshyari.com)