Distal Tibial Osteochondral Defects

The incidence of lesions of the distal tibia account for 4-7% of osteochondral lesions in the ankle, and OCD of the tibial plafond can be found in isolation or as a “kissing lesion” adjacent to a talus OCD. Kissing lesions can indicate a progression to osteoarthritis (1, 2). Incongruity of the articular surface from a traumatic event, such as a pilon fracture, can make these injuries difficult to treat. The distal tibia has a better blood supply and stiffer cartilage than the talus, which may allow the opportunity for healing after injury (3).

Following an injury, the patient complaints include ankle swelling, aching pain, and locking or catching.

This lesions are often difficult to see on X-ray, so a CT and/or MRI are usually necessary and help aide in operative planning. One study, showed no distinct location identified in a radiographic review of 8 patients (5). Another study looked at MRI findings of 38 patients with distal tibial lesions over a 7 year period. They found no specific distribution of location and that 16% had corresponding talus OCD (6).

Conservative treatment can be attempted for acute lesions with limited weightbearing for 6 weeks. Most lesions are operative as they usually present > 1 year after injury. The distal tibia can be a difficult area to reach, so the arthroscopic approach is favored. Options for repair include:

- Microfracture or curettage
- Bone graft
- Cartilage scaffolds
- Juvenile allograft

Open repair options include:

- Bulk allograft
- OATS plug - retrograde

On review of 880 consecutive ankle arthroscopies identified 23 patients (2.6%), with distal tibial OCD (1). 17 patients were examined with a mean follow up of 44 months. They found that 6/17 (35%) had both tibia and talus lesions. Treatment included excision, curettage, and abrasion arthroplasty in all patients...
(some with drilling). The AOFAS Hindfoot scores improved from 52 to 87 with
the following results:

- Seven = excellent
- Seven = good
- One = fair
- Two = poor

In summary, distal tibial OCD is uncommon but can be treated effectively with
arthroscopic techniques.

References
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