The Differences in Prevalence and Characteristics of the Osteochondral Lesions in the Intra-articular Fracture of Ankle and Calcaneus

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CONFLICT TO DISCLOSE

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- Chayanin Angthong, M.D.
- My disclosure is in the Final AOFAS Mobile App.
- I have a potential conflict with this presentation due to: financial support from Device Innovation, and Smith and Nephew (Thailand) to attend the meetings
The purpose of this study is to compare the differences in prevalence and characteristics of the osteochondral lesions which occurred in the intra-articular fracture of ankle and calcaneus.
Thirty two patients with the intra-articular fracture of ankle or calcaneus were recruited for this study. The patients were divided into two groups based on their locations of fracture; ankle (16 patients) or calcaneus (16 patients). The arthroscopic-assisted reduction and internal fixation was used in all patients. Baseline data, including the characteristics via Outerbridge classification and locations of osteochondral lesions at talar/tibial side (ankle group) or calcaneal/talar side (calcaneal group), arthroscopic treatment procedures, were collected for all patients. Statistical analyses were performed to compare the differences of the prevalence and characteristics of the osteochondral lesions between the two groups.
The mean ages of patients were 47.8 years and 46.1 years for ankle and calcaneal groups, respectively ($p=0.75$).

There were 5 men (31.3%) and 11 women (68.8%) in the ankle group, and 7 men (43.8%) and 9 women (56.3%) in the group with calcaneal fracture ($p = 0.47$).

The prevalence of osteochondral lesion was significantly higher in the ankle group (62.5%) than had been shown in the group with calcaneal fracture (6.3%, only found at calcaneal side) ($p=0.002$).

There were ten patients (62.5%) and only one patient (6.25%) who had the osteochondral lesion at talar and tibial sides in the ankle group.
The characteristics of osteochondral lesion via Outerbridge classification was significantly poorer in the ankle group (grade IV, 12.5%; grade III, 18.8%; grade II, 25%; grade I, 6.3%) than had been shown in the group with calcaneal fracture (grade II, 6.3%) \((p=0.005)\).

The microfracture was mainly performed (60%) in the osteochondral lesion with grade III-IV.
The prevalence and severity of osteochondral lesion were significantly higher in the ankle fracture group than had been found in the group with calcaneal fracture.

These evidences may help explain the rate of ankle osteoarthritis which is higher than subtalar arthritis in the posttraumatic setting.
References


