Osteochondral Lesion of the Talus: Osteochondral versus Chondral Type

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Summary
In our study, age related difference between osteochondral and chondral types was present and chondral type was more frequent over 45 years old. However, the clinical outcomes showed similar improvement in both types.

Introduction
According to the level of separated plane of talus, the osteochondral and chondral types are differentiated. There are many previous reports about the biomechanical and histological characteristics, however, the clinical reviews remain limited. The purpose of this study was to compare the clinical outcomes between the two types of osteochondral lesion of the talus (OLT) after arthroscopic treatment.

Methods
Between January 2001 and September 2009, 160 ankles in 155 patients received arthroscopic abrasion arthroplasty or microfracture for OLT. The half of these ankles (80 ankles) were diagnosed as a osteochondral type (group A) and the rest 80 ankles were chondral types (group B). Retrospectively, we reviewed all the patient’s operation records to know arthroscopic subtypes, presence of combined intra-articular pathology and other several parameters (age, body mass index, trauma history and location). For clinical evaluation, preoperative and postoperative visual analogue scale (VAS), American Orthopaedic Foot and Ankle Society (AOFAS) score and postoperative patient’s satisfaction were also evaluated.

Results
The age distribution had distinctive difference between two subtypes. The group A reached its peak at middle twenties and decreased with advancing age. However the group B had bi-peak distributions at each twenties and fifties. As a result, the chondral type was dominant over 45 years old (p=0.26). In group A, both VAS and AOFAS score were improved from 6.9, 61 preoperatively to 2.2, 87 at last follow-up (p<0.0001). In group B, they were also improved from 6.6, 65 to 2.5, 87 (p<0.0001). However, in comparison between the two groups, both VAS and AOFAS score at last follow-up had no statistical difference (p=0.4, p=0.9). The level of patient satisfaction in group A was excellent in 29 cases (36.3%), good in 39 (48.8%), fair in 10 (12.5%) and poor in 2 (2.5%). In group B, it showed excellent in 34 patients (42.5%), good in 31 (38.8%), fair in 11 (13.8%) and poor in 4 (5.0%). In the presence of remained or recurred pain, revision procedure (osteochondral autograft transfer) was needed in 6 cases of group A and 3 cases of group B. There was statistical significance in the correlation of obesity, presence of anterior bony spur and loose body with group B and subchondral cyst with group A.

Conclusion
In our study, age related difference between two types was present and chondral type was more frequent over 45 years old. However, the clinical outcomes showed similar improvement in both types.