

Avascular Necrosis of the Talus after Subchondroplasty: A Case Series

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Purpose

Articular cartilage injuries and early osteoarthritis are among the most common conditions seen by surgeons who treat active military and sports medicine patients. Subchondroplasty is a surgical procedure that uses the subchondral bone as its therapeutic target. It markets itself as a joint preserving technique that can prevent or delay a possible joint replacement or ankle joint arthrodesis. However, little is known about the complications and long-term outcomes with subchondroplasty in the foot & ankle. This case series illustrates talar avascular necrosis in the setting of talar subchondroplasty.

Literature Reviews

Mixed results have been found in knee literature with subchondroplasty. Bonadio et al.¹ found significant improvement in functional capacity up to 6 months post op. Chatterjee et al² found clinical failure in 10/22 patients performing the same procedure. Outcome based literature in the foot & ankle is absent.³



Fig. 1

Results

Table. 1

Time to AVN post Subchondroplasty (Months)	Pertinent Comorbidities	Non-compliance	Subsequent Surgeries
12	OSA,HLD	No	1; Arthroscopic Ankle Arthrodesis
9	Hirsutism, HLD, Depression	Yes	0
10	HTN,HLD	No	1; TAR
9	Anti-phospholipid Syndrome	No	0

Analysis & Discussion

Results of subchondroplasty have been favorable in the knee literature. This small case series emphasizes the importance of performing the subchondroplasty with caution. Careful patient selection should be optimized as each patient must adhere to post-operative protocol to maximize results. AVN is a major complication of orthopedic surgery significantly altering QoL post-operatively. AVN could be unique to the subchondroplasty procedure. Further research is warranted.

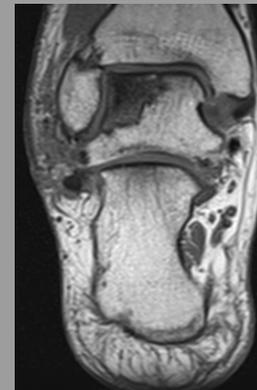


Fig.2

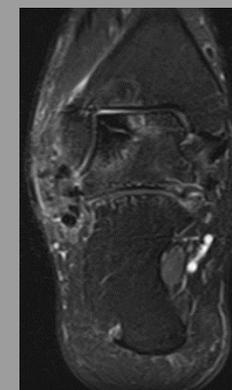


Fig.3

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Case Series

4 patients resulted in AVN of the talus after talar subchondroplasty. The surgical outcomes were reviewed with an 18 month follow up.