

Natural Course of Talar Avascular Necrosis during Short-Term Follow Up and Factors Associated with Disease Progression

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INTRODUCTION: This retrospective cohort study aimed to investigate the natural history of talar avascular necrosis (AVN) during short-term outpatient follow up and to identify the risk factors for progression to collapse and arthritic changes.

METHODS:

Thirty-four cases of talar AVN from 34 patients (15 males, 19 females) were included. The mean age of the patients was 48.9 years (SD 16.0 years) and the mean follow-up period was 39.5 months (SD 42.0 months). The patients were divided into two groups i.e., progression and non-progression groups. The progression group consisted of those who showed aggravation of the Ficat stage during the follow-up period or advanced arthritis of the ankle joint (Ficat stage 4) at presentation. Demographic data and information regarding medical comorbidities, trauma history, bilaterality, and location of the lesion (shoulder vs. non-shoulder lesions) were collected. Following the univariate analysis, a binary logistic regression analysis was performed.

RESULTS:

The location of the talar AVN was the only significant factor ($p=0.047$) associated with disease progression. A total of 14.3% (2 of 14) of the central (non-shoulder) talar AVN lesions showed progression, while 50% (10 of 20) of shoulder lesions aggravated during follow up. Age, sex, bilaterality, medical comorbidities, and trauma history were not associated with progressive talar collapse or subsequent arthritic changes in talar AVN.

DISCUSSION AND CONCLUSION:

Conservative treatment should be considered for a central lesion of the talar AVN because it tends to remain stable without progression. A more comprehensive study with a larger study population is required to establish the surgical indications for talar AVN.

