

The Role of Fixation of the Lateral Process of the Talus in Development of Subtalar Arthritis in Patients with Talar Neck or Body Fracture

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Purpose: Development of posttraumatic subtalar arthritis after talar neck and body fractures has been demonstrated to occur frequently and has been shown to correlate with inferior functional outcomes. The primary purpose of this study was to determine if fracture of the lateral process (LP) increases rates of subtalar arthritis in patients sustaining a talar neck or body fracture.

Methods: A retrospective review was performed at an academic Level I trauma center to identify all patients treated for a talar neck or body fracture. Standard preoperative and postoperative radiographs and CT scans were evaluated for involvement of the LP, the surgical procedure performed, and the development of subtalar arthritis.

Results: 86 fractures were included, all with greater than 1-year follow-up. 29 (67%) of the 43 talar neck fractures and 14 (33%) of the 43 talar body fractures had LP involvement. 76% percent of talar neck fractures with involvement of the LP developed subtalar arthritis compared to 36% of talar neck fractures without LP involvement ($P = 0.035$). 30 of the fractures had an independent LP fragment, 12 had no fixation, and all went on to develop subtalar arthritis while 10 of 18 that underwent fixation of the independent fragment developed subtalar arthritis ($P = 0.01$).

Conclusion: Involvement of the LP of the talus significantly increases the risk for development of subtalar arthritis in patients with talar neck fractures. If a talar neck or body fracture involves the LP, the LP should be treated with reduction and fixation in order to diminish the risk of development of subtalar arthritis.

