Surgical Reconstruction for Talocalcaneal Coalitions With Severe Hindfoot Valgus Deformity

Abstract

Introduction: Coalition resection can restore motion, and improve pain in patients with talocalcaneal coalitions (TCCs) and an aligned foot. However, there is some debate regarding appropriate treatment of patients with associated valgus deformity. The purpose of this study was to present the outcomes and complications following surgical reconstruction, with or without coalition resection, in a series of patients with TCC and severe hindfoot valgus.

Methods: Thirteen consecutive patients (14 feet) were evaluated. Eleven patients were male. Mean age was 14 years. Mean follow-up was 43.8 months. Seven patients (8 feet) underwent simultaneous resection of the coalition and reconstruction, and 6 patients (6 feet) isolated reconstruction. The talar-first metatarsal angle, the talar-horizontal angle, and calcaneal pitch were measured preoperatively and postoperatively. Clinical evaluation was made according to the American Orthopaedic Foot and Ankle Society ankle-hindfoot score.

Results: All radiographic values improved significantly and were within the normal ranges postoperatively. The average American Orthopaedic Foot and Ankle Society ankle-hindfoot score had improved from 45 to 98 points ($P<0.001$) in the group of simultaneous resection and reconstruction, and from 60 to 92.3 points ($P=0.002$) in the group of isolated reconstruction. All patients were asymptomatic at the last follow-up and were satisfied with the procedure.

Discussion: Surgical reconstruction with or without coalition resection can achieve significant functional and radiographic improvements, and symptoms relief in selected patients with TCCs and severe valgus deformity.

Level of evidence: Level IV-therapeutic study.

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