Long-Term Results of Reconstruction for Treatment of a Flexible Cavovarus Foot in Charcot-Marie-Tooth Disease

Reference

Scientific Literature Reviews

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Podiatric Relevance:
This study provides useful data to evaluate the long-term results of an algorithmic approach to reconstruction for the treatment of a cavovarus foot in patients with Charcot-Marie-Tooth disease.

Methods: Twenty-five consecutive patients with Charcot-Marie-Tooth disease and cavovarus foot deformity (forty-one feet) were studied. Patients had undergone surgery between 1970 and 1994. Surgical corrections consisted of dorsiflexion osteotomy of the first metatarsal, transfer of the peroneus longus to the peroneus brevis, plantar fascia release, transfer of the extensor hallucis longus to the neck of the first metatarsal, and in selected cases, transfer of the tibialis anterior tendon to the lateral cuneiform. Each patient completed the standardized outcome questionnaires (the Short Form-36 [SF-36] and Foot Function Index [FFI]). Radiographs were used to assess alignment and degenerative arthritis, and gait analysis was also assessed. The mean age at the time of follow-up was 41.5 years, and the mean duration of follow-up was 26.1 years.

Results: The correction of the cavus deformity was successful, however most patients had some recurrence of hindfoot varus. The patients had a lower mean SF-36 physical component score than age-matched norms, and the women had a lower mean SF-36 physical component score than the men. Smokers had lower mean SF-36 scores and significantly higher mean FFI pain, disability, and activity limitation subscores (p < 0.0001). Seven patients underwent a total of eleven subsequent foot or ankle operations. Moderate-to-severe osteoarthritis was observed in eleven feet.

Conclusions: The described procedures have been shown to achieve successful results with lower rates of repeat surgical procedures and degenerative changes when compared with patients undergoing triple arthrodesis.