



Charcot Foot Offloading in Stage 0 Is Associated With Shorter Total Contact Cast Treatment and Lower Risk of Recurrence and Reconstructive Surgery: A Pilot Study

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OBJECTIVE

Charcot foot (CF) requires prolonged offloading of the affected foot to decrease the risk of deformity. The earliest phase in active CF (stage 0) is characterized by inflammatory signs without established fractures or skeletal deformity. We investigated whether offloading in stage 0 influences duration of total contact casting (TCC), risk of recurrence, and future need for surgery.

RESEARCH DESIGN AND METHODS

All patients treated for active CF at Skåne University Hospital (Lund, Sweden) between 2006 and 2019 were screened for participation in a retrospective cohort study. CF events of included patients were classified as stage 0 or 1 according to X-ray and MRI reports.

RESULTS

A total of 183 individuals (median age 61 [interquartile range (IQR) 52–68] years, 37% type 1 diabetes, 62% men) were followed for a median of 7.0 (IQR 3.9–11) years. In 198 analyzed CF events, 74 were treated with offloading in stage 0 and 124 in stage 1. Individuals offloading in stage 0 had significantly shorter TCC duration (median 75 [IQR 51–136] vs. 111.5 [72–158] days; $P = 0.001$). The difference was sustained when including only MRI-confirmed CF. The risk of developing new ipsilateral CF events >1 year after introduced definitive footwear was lower in those treated with offloading in stage 0 (2.7% vs. 9.7%; $P < 0.05$). No individual treated with offloading in stage 0 underwent reconstructive surgery, compared with 11 (8.9%) treated with offloading in stage 1 ($P < 0.01$). Amputation rates were similar.

CONCLUSIONS

Offloading in stage 0 CF was associated with shorter TCC treatment, lower risk of a new CF event, and diminished need for reconstructive surgery. Future amputation risk was not affected.

Charcot neuropathic osteoarthropathy (i.e., Charcot foot [CF]) is an incompletely understood inflammatory condition affecting bones, joints, and surrounding structures in individuals with peripheral neuropathy, almost always in the foot and ankle, and is

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