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**The MABAL cast shoe for offloading plantar neuropathic diabetic foot ulcers: results from a 5-years retrospective analysis**

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**Background:** For more than a decade the MABAL cast shoe is used in our center for offloading treatment of plantar foot ulcers in diabetic patients. The MABAL cast shoe is an ankle-high combicast shoe worn with a walker sole attached to the bottom of the cast. The aim of this study was to evaluate retrospectively the efficacy of the MABAL cast shoe in offloading plantar neuropathic foot ulcers in diabetic patients. **Methods:** Medical files at the surgical units of the ZGT Almelo and ZGT Hengelo of identified diabetic patients who were treated with a MABAL cast shoe in the period 2004 to 2009 were retrieved and analysed. A total of 125 ulcers in 74 patients with diabetes and peripheral neuropathy were included. All ulcers were grade 1, 2, and 3 ulcers according to the University of Texas ulcer classification system. The plantar location of the ulcer was identified. Patients with severe peripheral ischemia or Charcot's osteoarthopathy were excluded from the analysis. Primary outcome measure was the proportion of healed foot ulcers. Secondary outcomes were the percentage healed ulcers at 12 weeks and at 20 weeks treatment. Further analysis included the healing percentage per grade of the University of Texas ulcer classification and per ulcer location. **Results:** In total 88% (110 of 125) of foot ulcers healed in the MABAL cast shoe. In 12 weeks, 64% of ulcers healed, in 20 weeks 85% of ulcers healed. The mean time to complete ulcer healing was 75 days, with a range of 6 to 442 days. Of all healed ulcers, 42% concerned a grade 1 ulcer of which 94% healed in a mean 58 days. Of grade 2 ulcers 84% healed in a mean 97 days. Of grade 3 ulcers, 88% healed in a mean 48 days. Of all hallux ulcers, 83% healed in a mean 60 days. All ulcers located at the first metatarsal heads healed in a mean 81 days. Of the lesser metatarsal head ulcers 81% healed in a mean 77 days. **Conclusion:** The results of this retrospective analysis show that the MABAL cast shoe may be an effective modality for offloading small as well as large plantar neuropathic foot ulcers in patients with diabetes. With an overall healing rate of 88%, the MABAL shoe is as effective as the total contact cast which is considered the gold standard offloading treatment for plantar neuropathic foot ulcers. The healing percentages of 64% at 12 weeks and 85% at 20 weeks are comparable to published data of other removable modalities such as removable walkers, and forefoot offloading shoes. However, most studies reported on grade 1 and 2 ulcers whereas this study shows that larger grade 3 ulcers can also be effectively treated with the MABAL cast shoe. This provides the clinical team with a useful and practical modality for offloading treatment of diabetic foot ulcers. Future analysis of the MABAL cast shoe will also include Charcot feet and ischemic ulcers. A prospective trial is currently underway which assesses the efficacy of the MABAL cast shoe compared to other common offloading modalities such as the total contact cast and forefoot offloading shoe.