

Total contact casting - a safe treatment modality in the management of Charcot osteoarthropathy and neuropathic foot ulcer

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Introduction and aims: Although total contact casting (TCC) is a gold standard treatment for Charcot osteoarthropathy and neuropathic foot ulcer, it has not become standard treatment in diabetic foot clinics, because of concern with complications. We report that in experienced hands and regular monitoring, TCC is a safe treatment modality in the management of Charcot osteoarthropathy and neuropathic foot ulcer with an incidence of only 4.2% cast-related abrasions. **Methods:** A total of 96 episodes of cast treatment were analysed prospectively over a 3 month period. Casting therapy was used in the management of neuropathic ulcers (20); Charcot osteoarthropathy (47) and a combined presentation of Charcot and neuropathic ulcers (29). Casting episodes included 71 with non-removable TCC and 25 with removable casts (Aircast walker or in-house manufactured bivalve cast). Cast-related complications together were recorded together with the number of weeks since the patient last attended the clinic. Cast related complications were compared between treatment with TCC and treatment with removable casts. **Results:** Casting episodes were reviewed for complications every 4 weeks ± 0.3 for the non-removable casts and every 5 weeks ± 1.3 for the removable casts, $p > 0.05$. There was no difference in the number of complications between the episodes of casting with TCC and episodes of casting with removable casts (8.4% versus 8%, $p > 0.05$). Minor abrasions were noted in 3 out of 71 TCC treatment episodes compared with 2 in 25 treatment episodes with removable casts (4% versus 8%, $p > 0.05$). These abrasions were treated with a protective dressing and did not alter patient management and casting therapy was continued. Other complications associated with TCC casting episodes included ingrown toe nail -1/71, cast-related pain and discomfort (1/71) and exudate leak (1/71). **Conclusions:** This study has shown that treatment with TCC is just as safe as treatment with removable casts. Total contact cast treatment was not associated with complications in 91.5%.