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Immediate full weight-bearing walker brace is a safe treatment for stage I and stage II foot Charcot arthropathy in diabetic patients

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Background and aims: Standard treatment of stage-I Charcot arthropathy of the foot involves application of a non-weight-bearing total-contact cast. Controversy exists regarding the duration of the non-weight-bearing period; some authors prescribe up to three months of non-weight-bearing. Recent experience applying immediate weight-bearing total-contact cast have been reported. There is no data for the use of removable walker braces in this situation. The purpose of this study is evaluate our preliminary results with the use of a full weight-bearing walker brace to treat patients with acute Charcot Joint. **Patients and methods:** 17 patients seen at our institution between January 2004 to January 2009 were initially diagnosed as foot Charcot arthropathy Eichenholtz Stage-I or early Stage-II. All patients were given a prefabricated removable walker brace. All patients were told about their condition, and full weight-bearing was allowed as tolerated. Patients were monitored in a fortnightly basis in the earlier stages, with clinical examination, temperature measurement, and standardized weight-bearing radiographs. After Eichenholtz Stage II until resolution of the acute stage of the disease the evaluations were taken monthly. The assessment of the deformities was done by measuring the angular relationship among the tarsal and metatarsal bones of the foot at each clinical evaluation. The assessed angles were the talar-first metatarsal angle in the antero-posterior weight-bearing view of the foot; and the talar-first metatarsal, calcaneal-first metatarsal, and calcaneal-fifth metatarsal angle in the lateral weight-bearing view of the foot. **Results:** There was no statistical difference between the initial (patients presenting with Eichenholtz stage I and early stage II) and final (Eichenholtz stage III) angles measures in this data ($p < 0.005$). No deleterious effect from weight bearing, specifically with regard to skin ulceration or rapid deterioration of the osseous architecture was observed in the studied cases. **Conclusion:** this preliminary study supports the use of immobilization in a prefabricated removable walker brace with immediate weight-bearing for acute Eichenholtz Stage-I or early Stage-II Charcot joint arthropathy of the foot and the ankle. This approach appears to be a safe, reliable method of treatment.