



Dynamic Splint versus Static Splint and Active Range of Motion in Treatment of Post Burn Hand Contracture

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Abstract : The Purpose: of this study was to investigate the therapeutic efficacy of the dynamic splint versus the static splint combined with active range of motion in treatment of post burn hand contractures. **Methods:** Forty patients with post burn hand contractures of both sexes ranged in age from 18 to 40 years participated in this study. Patients was selected within 6 months from the injury they were assigned randomly into two groups of equal numbers (20 for each group). **Group (A):** modified dynamic splint group. **Group (B):** static splint with active range of motion group.

Evaluation for range of motion was done by the radiological measurement, hand grip strength was assessed by Hand held Dynamometer and Jebsen hand functional scale was used to evaluation of hand function. **Results:** ROM of MCP and hand functional scale had significant increase after treatment application (Post-treatment) for dynamic group when compared with the static splint and active range of motion group, while there were a non-significant difference in the hand grip strength (Post-treatment) between both groups of the study. **Conclusion:** modified dynamic metacarpophalangeal joint flexion orthoses provide continuous flexion to metacarpophalangeal joint that is needed for the restoration of range of motion in post-burn hand contractures. For the clinical application of hand orthoses.

Key words: Hand Contracture, Dynamic Splint, Static Splint, Range of Motion, Orthotic devices, Rehabilitation, Burns.