

Metacarpophalangeal and interphalangeal joint arthrodesis: a comparative study between tension band and compression screw fixation.

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Abstract

A retrospective, comparative cohort study was performed of metacarpophalangeal or proximal interphalangeal joint arthrodesis with either tension band (n = 28) or compression (Acutrak Mini) screw (n = 29) methods. We compared rate of union, healing time, complications, and re-operation rate. Union was achieved in 26/28 (92.8%) of the tension band group (9.4 weeks) and 24/28 (85.7%) of the compression screw group (9.8 weeks). Only 28 patients in the screw group were assessed for union as one patient in the screw group sustained a fracture at the time of insertion and was converted to tension band fixation. The complication rate was 8/28 (28.6%) in the tension band group and 8/29 (27.6%) in the compression screw group. Re-operation rate was 9/28 (32.1%) in the tension band group and 1/29 (3.6%) in the compression screw group. Our findings indicate that bone healing, healing time, and complications are similar in both groups. The tension band technique had a significantly higher re-operation rate (hardware removal), but was the technique for salvage following failure of the screw technique.