

# 10<sup>TH</sup> GLOBAL ORTHOPEDICIANS ANNUAL MEETING

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## Outcomes following distal inter-phalangeal fusion in the hand using Acutrak® screws

Chui Ling Teng<sup>1</sup>, Akshay Malhotra<sup>2</sup>, Maulik Gandhi<sup>2</sup>, Rohit Singh<sup>2</sup>, David Ford<sup>2</sup>, Justin Lim<sup>1</sup> and Simon Pickard<sup>2</sup>

<sup>1</sup>University Hospital of North Midlands, UK

<sup>2</sup>Robert Jones and Agnes Hunt Orthopaedic Hospital, UK

**Purpose:** The purpose of the study was to analyze retrospectively the functional and radiographic outcome of patients undergoing distal interphalangeal joint arthrodesis at our institute.

**Methodology:** Between 2010 and 2014, 46 distal interphalangeal joint arthrodesis were carried out in 31 patients at our institution. The case group consisted of 22 females and 9 males with an average age of 61 years (50 years to 75 years). Average follow up was 10 months (6 months to 31 months). Four patients had concomitant procedures e.g. lateral band transfer. Indications for surgery were: Failure of conservative treatment; severe pain; and diminished thumb and finger function hampering everyday life. The technique is through dorsal incision over the joint surface and preparing the joint to accept the guide wire for a mini/micro Acutrak®. Hand therapist and consultant surgeon follow up was there for 2 and 6 weeks post-operation, after which on an individual basis.

**Findings:** Four (12 fingers) patients underwent the procedure as part of rheumatoid hand reconstruction while 27 (33 fingers) patients required the procedure due to osteoarthritis. There were 6 thumbs and 39 fingers operated upon. In 25 digits micro Acutrak® screw system was used and in 20 digits the mini Acutrak® screw system was used. Two digits required re-operation, one for infected non-union and the other simple non-union. Both the non-unions were in the micro Acutrak® screw. Three cases of superficial wound infection settled down with antibiotics. Average screw size used 20 mm. Clinically, 85% rated good, 10% fair, and 5% poor results.

**Conclusion:** Our experience of arthrodesis using the Acutrak® system shows better results if compared to K wire fixation. However even within the Acutrak® system better results were noted in the mini Acutrak® group than the micro Acutrak® group. The practice of both the senior authors has now changed to using only the mini system for all their DIPJ arthrodesis.

chuilin.teng@doctors.org.uk

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