

Case Study:

Use of the ArcPhix™ Angled Compression Screw for Functional Flexion of the 3rd Distal Interphalangeal (DIP) Joint to Treat Isolated DIP Arthritis



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Pre-op



Case Presentation

Patient was a 58-year-old female who suffered from isolated arthritis on her 3rd distal interphalangeal joint. An intramedullary (IM) approach that provided compression, stable fixation, and functional flexion DIP fusion was recommended to achieve early mobilization and maintain finger dexterity and grip strength.

Pre-op Plan

Dr. Rekant normally considers IM fixation with headless compression screws due to satisfactory DIP fusion outcomes but found it difficult to create an angled fusion with a straight implant. He proceeded with the ArcPhix angled compression screw because the pre-bent design simplifies the construction of a clinically appropriate angle (18°) for functional flexion of the DIP joint and is accompanied by the additional benefits of improved finger dexterity and grip strength compared to full extension fusions.



Operative Findings and Approach

Dr. Rekant removed the scar tissue and decorticated the bone ends in a manner that allowed for good apposition at the desired angle. He aligned the distal and middle phalanges, in a manner typical for standard IM K-wire fixation, for IM guidewire placement through both the distal and middle phalanges in a retrograde fashion. Afterwards, Dr. Rekant drilled by passing the cannulated drill over the guidewire to the desired depth of the implant, which was approximately 16mm into the middle phalanx. He removed the drill and guidewire to insert the ArcPhix angled



Post-op

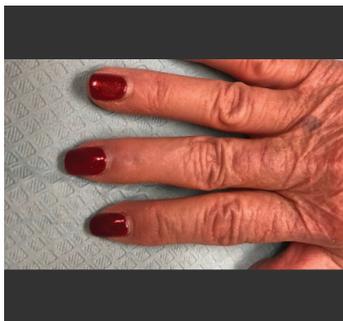


compression screw into the drill hole at the tip of the distal phalanx. Dr. Rekant advanced the screw until the apex of the bend was across the DIP joint with the convex side of the screw facing dorsally and the threads were past the fusion site. With ArcPhix, he achieved excellent compression and stability across the DIP joint. Total surgery time was approximately 15 minutes.



Follow-up

Immediately after surgery, Dr. Rekant implemented his post-op protocol that includes the utilization of a removable cap splint, which patients normally tend to discard because the fixation is extremely stable with ArcPhix. The patient did very well after surgery and by the 4-weeks post-op, she was using her finger naturally and returned to her daily activities without any complications.



Discussion

Dr. Rekant has been pleased with the ArcPhix angled compression screw because it not only achieves excellent fixation, allowing early mobilization, but also results in functional flexion, ensuring functional dexterity and grip strength for daily activities.

