

Case Study:

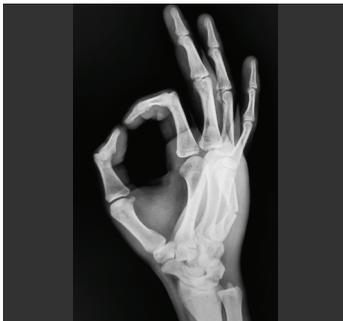
Use of the INnate™ Intramedullary Threaded Nail for a Midshaft, Transverse Fracture of the 5th Metacarpal From an Impact Injury



Paul Sibley, DO, FAOAO

Lehigh Valley Orthopedic Institute,
Allentown, PA

Pre-op



Case Presentation

Patient was an 18-year-old male who presented to clinic with a midshaft, transverse fracture to his 5th metacarpal suffered from an impact injury while working out at the gym. A minimally invasive approach resulting in early mobilization was desired as the patient was an active musician and athlete who could not afford to be immobilized for even a short period of time.

Pre-op Plan

Dr. Sibley normally considers K-wire fixation for straightforward fracture patterns but was concerned that the lack of rigidity and extramedullary hardware would lead to immobilization and complications such as infections. He decided to proceed with a percutaneous, intramedullary approach using the INnate threaded nail because the nails were long and wide enough in length and diameter to fill the canal, providing stable fixation for early range of motion.

Operative Findings and Approach

Upon anatomic reduction, Dr. Sibley made a small stab incision on the dorsal third of the metacarpal head and inserted the provided guidewire across the fracture site under fluoroscope. He then used the INnate depth gauge to determine that a 4.5mm x 45mm threaded nail was needed for the 5th metacarpal. Dr. Sibley proceeded to use the cannulated drill to drill over the guidewire and implant the cannulated INnate nail until the trailing end was beneath the articular cartilage and canal-fill was achieved at the isthmus. Total surgery time was approximately 10 minutes.

Post-op



Follow-up

Immediately after surgery, the patient experienced minimal pain and full active range of motion. At 1-week post-op, he played his saxophone at his music recital and guitar during his leisure time. At 2-weeks post-op, the patient was back to playing lacrosse during his senior year without any restrictions.

Discussion

INnate allowed Dr. Sibley to use minimally invasive approach with appropriately sized implants to achieve stable fixation. Unlike K-wires, the diameter and robust length offering of INnate achieves canal-fill and rotational stability, resulting in immediate to early range of motion. This allows patients to minimize their downtime and return to work or daily activities faster than other implants and surgical approaches.