

Philosophical Precision: Long PHILOS in the Surgical Odyssey of Segmental Proximal and Midshaft Humerus Fractures with Radial Nerve Injury - A Case Report

¹Rozali, AF; ¹Fuad MA

¹Orthopaedic and Traumatology Department, Hospital Sg Buloh, Selangor, Malaysia

INTRODUCTION:

Segmental fractures in the proximal and midshaft regions of the humerus, along with radial nerve injury, create a complex scenario requiring meticulous attention in orthopedics[1]. The interplay between bone stabilization and nerve recovery adds an extra layer of challenge to the treatment. This case report highlights surgical intervention and outcomes in a patient with these fractures, emphasizing the presence of concurrent radial nerve injury and the comprehensive approach for optimal recovery.

REPORT:

A 25-year-old motorcyclist presented to Emergency department following a motor-vehicle accident. Post-trauma, the patient reported pain in the right shoulder and arm, and upon examination, stable vital signs were noted. Further physical assessment revealed swelling, deformity in the right arm, along with wrist and fingers drop. Radiographic imaging confirmed segmental proximal and midshaft fractures of the right humerus.

Upon careful consideration in this complex case, meticulous planning was deemed essential, weighing the options between long PHILOS and interlocking nail humerus. The decision to utilize the PHILOS system was based on several key factors, including anticipation of challenges in reducing the segmental fracture, mitigating the risk of injury to critical rotator cuff muscles like the supraspinatus, and ensuring the integrity of the radial nerve throughout the surgical and post-surgical phases. The intraoperative procedure proceeded smoothly, with confirmation of the intact radial nerve.

After successful intervention, the patient was discharged in good condition and directed to rehabilitation. During the latest follow-up, the fracture demonstrated absolute stability, and

there were promising signs of healing progress in the radial nerve.



Figure 1: Post trauma radiographic imaging

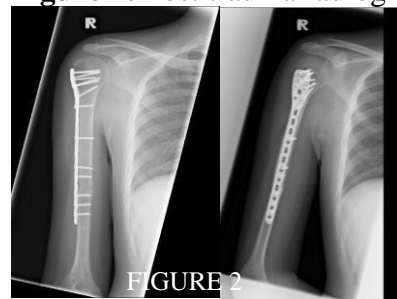


Figure 2: Post fixation radiographic imaging

CONCLUSION:

In addressing the complexity of segmental proximal and midshaft humerus fractures accompanied by radial nerve palsy, the utilization of the Long PHILOS plate emerges as an elegant and effective surgical solution. This approach not only provides stability for fracture fixation but also demonstrates a nuanced strategy in managing associated nerve injuries [1]. The amalgamation of contemporary techniques, exemplified by the Long PHILOS plate, presents a refined orthopedic intervention, offering promising outcomes in challenging cases.

REFERENCES:

- 1) Zhang H, Ni W, Gao S, Liang X, Zhou A. Long PHILOS locking compression plate for treatment of proximal humerus and humeral shaft fractures. 2009; 23: 419–22