

Adult PHILOS Humeral Plate For The Fixation Of Paediatric Proximal Femur Fracture

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INTRODUCTION:

Paediatric proximal femur fracture poses difficulties as usual standard implant size for such fracture is not available. Here, we describe the use of alternative implant in the fixation of paediatric proximal femur fracture.

MATERIALS & METHODS:

We prospectively assessed the results of the modified use of the adult proximal humerus locking plate (PHILOS long (™) Synthes®), Zuchwil, Switzerland) in a 14-year-old-boy with closed comminuted intertrochanteric fracture of right femur following motor vehicle accident.

RESULTS:

The fracture was stable after fixation. Subsequently, the patient made a full postoperative recovery and follow-up at 3 months was satisfactory with radiographic evidence of bony union and patient able to ambulate unsupported.



Figure 1 (A-D): Radiographic imaging showing comminuted intertrochanteric fracture of right femur



Figure 2: Intraoperative picture showing PHILOS humeral plate fix contours of the paediatric proximal femur



Figure 3: X-ray at 2 months post operation showing good progression of bone healing (A), Pelvic-AP x-ray at 3 months post operation showing united fracture site (B), Patient able to full weight bearing with no significant limb length discrepancy at 3 months post operation (C)

DISCUSSIONS:

Given the high loads present at the proximal femur level, plating using constructs without angular stability frequently leads to limb length discrepancy and loss of reduction.¹ The broad end of the PHILOS, when placed proximally, gave options to enable an angular stable construct to enhance the grip in multi-fragment fractures of proximal femur that has been shown to give good outcome². Apart from that, adult PHILOS long humeral plate was found to adequately adapt to the anatomy of the proximal femur as described by Luis E et al that lead to successful treatment of paediatric subtrochanteric non-union.³

CONCLUSION:

Adult PHILOS humeral plate is a reliable and good alternative for fixation of paediatric proximal fracture of femur.

REFERENCES:

1. Jarvis J Et al. J Trauma. 2006; 60:613–619.
2. Vigler M Et al. J Pediatr Orthop B. 2006; 15:439–442.
3. Luis E Et al. J Orthop Trauma 2011;25: e63–e67)