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DOI: <http://dx.doi.org/10.18203/issn.2455-4510.IntJResOrthop20170790>

Proximal humerus fractures operated with PHILOS plate: 4 year prospective study

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Abstract

Background: Fractures of proximal humerus are still an unsolved problem in many ways. Locked plating is becoming more common; precise knowledge of and experience with the surgical technique is required to maximize clinical outcomes. However the goal of proximal humerus fracture fixation should be stable reduction allowing early mobilization. This study is conducted to study the results and complications of proximal humeral fractures treated by anatomic locking compression plate (PHILOS- proximal humerus interlocking system) and PHLP- Pro.

Methods: This is a 4 year prospective study, conducted in the department of Orthopaedics in Shri B M Patil Medical College & Hospital, Vijaypur. Displaced two part, three part and four part fractures of proximal humerus with or without shoulder dislocation including fractures involving osteopenic bone were included. The functional assessment was done according to constant Murley score and DASH score at the end of 6 months.

Results: Out of 60 patients, 56 were available for follow-up: 24 patients having excellent results (4 are 2 part, 20 are 3 part fractures), 32 patients having good results (22 are 3 part, 10 are 4 part fractures). None of the patients had fair or poor results.

Conclusions: In conclusion, the internal fixation of proximal humeral fractures with the use of anatomic locking compression plates yields reliable results when utilized correctly. We believe that, provided the correct surgical technique is used by competent surgeon, the anatomic locking compression plate is suitable for the stabilization of proximal humeral fractures and can lead to a good functional outcome.

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Keywords

Proximal humerus fracture, PHILOS, PHLIP, Constant Murley score

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References

Cofield RH. Complications of operative fixation of proximal humeral fractures in patients with rheumatoid arthritis, *J Shoulder Elbow Surg.* 2005;14:559.

Williams GR, Wong KL. Two part fractures management of proximal and distal humerus fractures. *Ortho Clin North Am.* 2000;31(1):1-21.

Lind T, Kronerck, Jensen J. The epidemiology of fractures of proximal humerus, *Arch Ortho Trauma Surg.* 1989;108:285.

Lous U, Fredericka B. Fractures of proximal humerus. In: Rockwood CA, editor. Philadelphia: W.B. Saunders; 1990: 278-334.

Powell SE, Chandler RW. Fractures of proximal humerus. In: Frank W Jobe, editor. Textbook of operative techniques in upper extremity sports injuries. Mosby; 1995: 313-340.

Björkenheim JM, Pajarinen J, Savolainen V. Internal fixation of proximal humeral fractures with a locking compression plate: A retrospective evaluation of 72 patients followed for a minimum of 1 year. *Acta Orthop Scand.* 2004;75:741-5.

Flores S, Merk BR. Two-part surgical neck fractures of the proximal part of the humerus: A biomechanical evaluation of two fixation techniques. *J Bone Joint Surg Am.* 2006;88:2258-64.

Hessmann M, Gehling H, Gotzenl. Plate fixation of proximal humerus fracture with indirect reduction; surgical technique and results using the shoulder score. *Injury.* 1999;30:453-62.

Wanner GA, Romero J, Hersche O. Internal fixation of displaced proximal humerus with two one-third tubular plates. *J Trauma.* 2003;54:536-44.

Wijgman AJ, Roolker W, Patt TW. Open reduction and internal fixation of three and four part fractures of the proximal humerus. *J Bone Joint Surg Am.* 2002;84:1919-25.

Palvanen M, Kannus P, Niemi S. Update in the epidemiology of proximal humeral fractures. *Clin Orthop Relat Res.* 2006;442:87-92.

Athanasios K, Constantinos DA, Tarun T, Dimitrios SK, Alexander A. Fixation of Proximal Humerus Fractures Using the PHILOS Plate: Early Experience. *Clin Orthopaed Rel Res.* 2006;442:115-20.

Shahid R, Mushtaq A, Northover J, Maqsood M. Outcome of proximal humerus fractures treated by PHILOS plate internal fixation. Experience of a district general hospital. *Acta Orthop Belg.* 2008;74(5):602-8.

Brunner F, Sommer C, Bahrs C, Heuwinkel R, Hafner C, Rillmann P, et al. Open reduction and internal fixation of proximal humerus fractures using a proximal humeral locked plate: a prospective multicenter analysis. *J Orthop Trauma.* 2009;23(3):163-72.

Liu XW, Fu QG, Xu SG, Zhang CC, Su JC, Wang PF, et al. Application of PHILOS plate with injectable artificial bone for the treatment of proximal humeral fractures in elderly patients. *Zhongguo Gushang.* 2010;23(3):180-2.

Agudelo J, Schurmann M, Stahel P, Helwig P, Morgan SJ, Zechel W, et al. Analysis of efficacy and failure in proximal humerus fractures treated with locking plates. *J Orthop Trauma.* 2007;21(10):676.

Bishop JY, Donaldson CT, Open Reduction and Internal Fixation of Proximal Humeral Fractures with Use of the Locking Proximal Humerus Plate. *J Bone Joint Surg.* 2009;26(7):161-70.

