

**Proximal Humeral Fracture Fixation Using the PH Cage:  
A Retrospective Study of 125 Patients to a Minimum of 6 Months Post Treatment**

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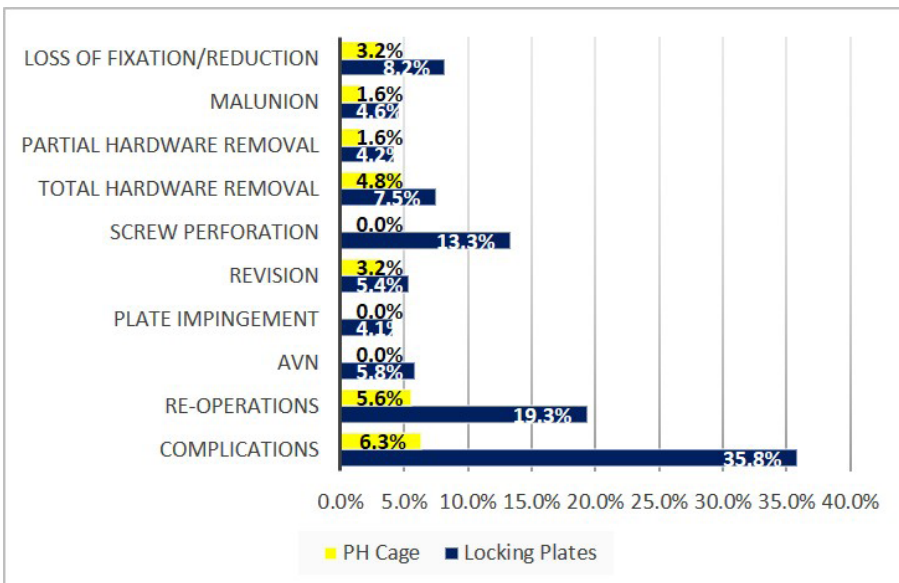
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**Purpose:** Locking plates are commonly used for surgical fixation of proximal humeral (PH) fractures, but complication rates remain high. A new technology, termed PH Cage, uses an intramedullary implant to provide direct support to the humeral head. It allows the surgeon discretion with both the number and direction of screws needed to fix fractures. This is a retrospective study of PH Cage usage in 125 patients to a minimum 6 months of follow-up.

**Method:** A retrospective analysis of PH Cage was assessed for 125 patients to a minimum of 6 months following fracture fixation. Cases include 2-, 3-, and 4- part fractures. Surgical approaches used include deltopectoral, deltoid-splitting, or less invasive procedures. PH Cage complication rates are compared directly to a literature analysis of complication rates for locking plates compiled from 2100 patients in 27 publications.

**Results:** 125 PH fractures were treated in 125 patients using the PH Cage. Follow-up average of 11.3 months (range, 6.0-18.2) following fracture fixation of which 21.4% were male and 78.6% female. Average age was 64.1 years (range, 25-95). Fracture patterns: 30.6% 2-part, 41.3% 3-part, 26.4% 4-part, and 1.7% miscellaneous. Approaches: 69.8% deltopectoral approach, 4.3% deltoid split approach, 25.9% less invasive. Overall total complications and reoperations were 6.3% and 5.6% for PH Cage as compared to 35.8% and 19.3% respectively for locking plates.

**Conclusion:** The PH Cage is a novel technology used for the treatment of PH fractures. A retrospective analysis of 125 patients implanted to a minimum of 6 months with the PH Cage demonstrates a significantly lower incidence of total complications when compared to locking plates.



See pages 401 - 442 for financial disclosure information.