

## Polarus Intramedullary Nail for Nonunion of Humerus Neck

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### Purpose

Evaluate the clinical results of humerus neck nonunion treated with Polarus intramedullary nail.

### Materials and Methods

8 patients who underwent surgery for nonunion of humerus surgical neck fracture were included. All patients were female, the average age was 65 years. 5 out the total 8 cases initially received surgery, open reduction and internal fixation with metal plate in 1 case, Ender nail insertion in 2 cases, external fixator in 1 case and closed reduction and percutaneous pinning in 1 case. The other 3 non union cases initial received conservative management. The average period of nonunion was 9 months in the operated group and 6.2 months in the conservative group. All 8 cases received closed reduction with intramedullary Polarus nail and auto iliac bone graft. Union was confirmed radiologically, and functional evaluation was done with the UCLA functional criteria.

### Results

All 8 cases showed union on radiologic evaluation. Average time to union was 3.5 months, average follow up period was 27 months. Average UCLA shoulder evaluation score was 7.6 points preoperatively which improved to 26.3 points after surgery. Active shoulder flexion was 40.7 degrees preoperatively which increased to 104 degrees after surgery. Shoulder abduction improved from 32.9 degrees preoperatively to 96.3 degrees after surgery. UCLA functional criteria was good in 5 cases and fair in 3 cases, which no poor cases.

### Conclusion

Polarus IM nailing and AIBG is a useful method for treating nonunion of humerus neck fracture with improvement in union and function.