ORIF for Treatment of Comminuted Fracture of Proximal Humerus O-192

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Introduction: The objective of this study was to evaluate the clinical and radiological outcome of open reduction and internal fixation with plating in patients with comminuted proximal humerus.
Materials and Methods: This is a retrospective study of 116 comminuted proximal humerus fracture cases treated with ORIF using plating between 2004 and 2010. The mean age was 38.6 years. Patients including fracture of proximal humerus, Neer three-part and four-part. All the patients were evaluated with plain radiographs preoperatively. The operation was performed through a standard anterior lateral approach with minimal soft tissue dissection used during operation in order not to impair vascularization of the fracture fragments. We use buttress plate, anatomic plate or locking plate after reduction. Passive exercise was initiated on the next day of surgery. We use plain radiographs to assess the bony condition including implant failure, loss of reduction, malunion and bone healing and use The constant score for the clinical result. The mean follow-up was 12 months (range 6 to 15 months).
Results: At mean 12 months follow-up, the mean Constant score of the patients was 88.3 (range from 69 to 100). 3 patients had implant broken due to another trauma. 1 patient had deep infection and required implant removal. 3 patients had reduction loss and need another surgery of hemiarthroplasty.
Conclusion: Plating for comminuted fracture of proximal humerus seems a good treatment for most of these patients. In some cases, such as elderly, medical condition compromise or more comminuted fracture, primary hemiarthroplasty may have good result for these patients.

比較使用骨髓內釘與鋼板內固定治療骨折的臨床結果 O-193
Comparison of Shoulder Function after Humeral Shaft Fracture Treated by Plate Osteosynthesis and Intra-medullary Fixation.

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Introduction: Most of the humeral shaft fractures can be treated with the functional bracing with over 90% of union rate in adult patients. However, when intramedullary nailing is chosen, the possibility of sub-sequential shoulder function impairment would occur, since the insertion of the nail requires penetration of the supraspinatus muscle tendon. Conventional plate osteosynthesis also may cause potential complications resulting from extensive soft tissue dissection. Currently, minimally invasive plate osteosynthesis (MIPO) for humeral shaft fractures, with the advantage of minimal soft tissues compromise. For this purpose, we would review and evaluate the shoulder function of our patients after surgical treatment for fracture of humeral shaft and retrospectively between plating and ILN fixation in our institution.
Materials and Methods: All patients with a humeral shaft fracture treated in our institution during a 6-year period (January 2006 to December 2011) were retrospectively identified via the computer files at the Department of Radiology. Altogether, the clinical and radiographic data were reviewed from the medical charts. The patients were classified into two groups, included antegrade intramedullary (IM) nailing and plate fixation functional brace. All patients were evaluated the clinical outcome with Oxford shoulder score after a minimum of 6 months after the fracture.
Results: There were no statistically significant differences between these two methods in the mean age, gender distribution, injury pattern, fracture type, pre-surgical stay, and surgical time. No statistically significant differences in union rate or radiographic healing time between the two treatments. The Oxford shoulder score at minimal half years after the injury was better in the unilateral PTLP group.
Discussion: There would be no significant difference plate osteosynthesis and intra-medullary fixation in shoulder joint impairment.