

Open Intramedullary Nail with Tension Band and Lock Sutures on Proximal Humeral Fracture: Hot Air Balloon Technique

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Introduction

In order to reduce complications and to increase fixability occurred after the internal fixation of proximal humeral fractures, interlocking intramedullary nailing, and tension band, and lock suture were performed simultaneously and their results are reviewed.

Material and Methods

Twenty-six cases that received an operation for a proximal humeral fracture were selected. The mean follow-up period was 39 months (range, 24~59 months). The selected cases included 8 cases of surgical neck fracture, 3 cases of surgical neck fracture combined with humeral shaft fracture, 12 cases of three parts fracture, 1 case of 4 parts fracture, and 2 cases of fracture-dislocation.

Result

Fracture union was shown in 25 of the 26 cases on the final follow-up. The average visual analog scale of pain was 1 point (range, 0~6 points). While average Neer score was 90 points (range, 45~99), the functional evaluation of American Shoulder and Elbow Society (ASES) average score was 85 (range, 40~100). When patients were divided to into those less and more than 65 years old and into 2 parts or 3 parts fractures, postoperative pain, ASES, score, and Neer scores showed no difference between two groups.

Conclusion

Open intramedullary nailing accompanied by a tension band and lock suture on for a proximal humeral fracture shows sufficient fixability in the aged patients, and therefore, the good postoperative shoulder function can be expected.

Key word: Fracture, Tension band suture, Lock suture, Intramedullary nailing, Proximal humerus, Shoulder.