

## Coracoclavicular Stabilization Using a Suture Button Device for Neer Type IIB Lateral Clavicle Fractures

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### Summary:

Coracoclavicular stabilization using a suture button device for Neer type IIB lateral clavicle fractures yielded satisfactory radiological and clinical outcomes. The major advantage of this technique is that implant removal is not required.

### Abstract:

**Background:** The treatment for Neer type IIB fractures remains especially controversial. It is not easy to achieve stable fixation in Neer type IIB fractures because the lateral fragment is too small. Although various fixation techniques have been proposed to manage this fracture type, high complication rates have been reported. The purpose of this study was to evaluate the radiological and clinical outcomes of coracoclavicular (CC) stabilization using a suture button device for Neer type IIB lateral clavicle fractures.

**Methods:** Eighteen consecutive patients with Neer type IIB fracture were treated with CC stabilization using a TightRope™ (Arthrex, Naples, FL, USA). The mean follow-up period was 46.6 months (range, 24-75 months). Radiological outcomes were assessed using serial plain radiographs. Clinical outcomes were assessed using the visual analogue scale (VAS) pain score, University of California, Los Angeles (UCLA) score, American Shoulder and Elbow Surgeons (ASES) score, and subjective shoulder value (SSV). Intraoperative and postoperative complications were also evaluated.

**Results:** Seventeen cases (94.4 %) showed complete bony union. The mean final VAS pain score, UCLA score, ASES score, SSV were 1.1, 31.3, 88.5, and 88.6 %, respectively. Four complications were observed: i) intraoperative coracoid process fracture, ii) nonunion, iii) delayed union, and iv) shoulder stiffness. A case with a coracoid process fracture during coracoid tunnel generation was converted to the K-wire tension band technique.

**Conclusion:** CC stabilization using a suture button device for Neer type IIB lateral clavicle fractures yielded satisfactory radiological and clinical outcomes. It can be a useful option for stable fixation in unstable case with small distal fragment. The major advantage of this technique is that implant removal is not required.