

## Prevention of shoulder stiffness following repair of the rotator cuff

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**Introduction:** Shoulder stiffness is common following shoulder surgery. Successful immediate postoperative painless passive motion is mandatory to regain early normal function.

**Patients and Methods:** From April 2001 to August 2007, in a prospective randomized control study, the outcome of 46 patients who underwent open rotator cuff repairs was evaluated. Patients were randomly selected to have either subacromial Bupivacaine (SAB-group) or subacromial saline (SAS group). The technique of open surgical repair was standardized for all patients. After repair, an epidural catheter was inserted deeply in the subacromial region for 4 days. Using a syringe pump, the SAS group received 3ml/h of 0.9% saline while SAB group received 3ml/h of 0.25% Bupivacaine. Both groups were allowed for systemic Pethidine via PCA machine.

**Results:** The immediate postoperative effects showed significant pain reduction on passive elevation, greater range of passive elevation, less Pethidine consumption, less vomiting, greater satisfaction, and shorter hospital stay in the SAB group ( $p < 0.001$ ). Early results at the 6th month showed significant improved function and reduced risk of developing stiffness compared with SAS group ( $p < 0.05$ ). Significant positive correlation was found between the range of passive elevation obtained on the 4th post operative day with the constant scores of both groups at the 6th month's assessment ( $p < 0.0001$ ).

**Conclusion:** The SAB technique can effectively return the operated shoulder back to its normal early and reduces the incidence of early postoperative stiffness.

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## Reconstruction plate versus minimal invasive retrograde titanium elastic nail fixation for displaced midclavicular fractures

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**Background:** It is now generally accepted that displaced midshaft clavicle fractures benefit from internal fixation. Plating and intramedullary fixation have become the accepted methods of fixation. The purpose of this study was to see if one method of fixation of clavicle fractures has a lower complication rate and higher union rate than the other.

**Patients and methods:** Between December 2003 and September 2008, 38 patients were treated randomly by either plating (plate group) or retrograde nailing (RTEN group). Primary outcome measures included functional Constant scores, radiological union rate and union time. Clinical and radiological assessments were performed at the 6th week and the 3rd, 6th and 12th month postoperatively. Secondary outcome measures included the perioperative data (mean surgery time, blood loss, wound size, and hospital stay), and the complication rates.

**Results:** Similar results obtained in both groups regarding functional and radiological outcome after the 12th week ( $P > 0.05$ ). However, the RTEN group showed earlier union and functional recovery at the 6th week ( $P < 0.05$ ). The plate group showed significantly higher rate of complications (15.8%) compared with the RTEN group (0%;  $P < 0.05$ ). The plate group also showed significantly higher values for the perioperative data ( $P < 0.001$ ).

**Conclusion:** Both techniques are equally effective at treating displaced midclavicular fractures, and give better function and fewer complications than nonoperative treatment. The RTEN technique has more advantages and lower complications than plating, making its use more favorable. It is recommended for athletes and young active individuals, and can be used as an alternative to conservative treatment or plate fixation.

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