Outcome of precontoured anatomical plate in displaced middle third clavicular fractures

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Introduction: Non operative treatment for middle third clavicle fractures remained mainstay for until last two decades. But due to the prevalence of nonunion, symptomatic malunion and shortening for displaced fractures, trend has shifted towards operative management. Our study is aimed at prospectively evaluating the functional outcome of 120 patients treated with open reduction and plating with precontoured anatomical plate. This study estimates the functional outcome in terms of DASH score.

Methodology: 120 patients from 16 years to 60 years of age, with displaced (>2cm) and/or shortened (>2cm) or comminuted middle third clavicular fractures were included in this prospective observational study conducted in Bir Hospital and National Trauma Center over four years period. Open reduction and internal fixation with precontoured anatomical plate was done. Postoperatively arm is held in a sling for about 3 weeks with intermittent pendulum exercise after one week or as soon as the pain is tolerable and range of motion started after four weeks of surgery. Patients were followed up on 2, 6, 12 and 24 weeks. Functional outcome was assessed using DASH score. Statistical analysis was done using SPSS 22.

Results: Mid clavicular fractures were more common among males and left side was commoner than right. Younger age group was more commonly affected. All fractures united in a mean radiological union period of 7.1 weeks. 6 cases developed pain, 23 had hardware prominence, 5 case developed superficial infection. DASH score was at significant negligible level by 24 weeks. 98% of patients returned to their work by 12 weeks.

Conclusion: Open reduction and internal fixation with pre-contoured anatomical plate in displaced middle third clavicular fractures is safe procedure that avoids complications associated with non-operative management and provides good functional outcome with early return to pre-injury activities.

Biography

Dipendra Pandey is a Consultant Orthopaedics Surgeon working at government based national Trauma Centre at Kathmandu in Nepal. He completed his MS (Orthopaedics and Traumatology) from National Academy of Medical Sciences, Nepal. He was award with AOA Trauma Fellowship from NITOR, Bangladesh. Besides Trauma, he is much interested in the field of rheumatology and osteoporosis.

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