

## Successful Conservative Therapy in Rockwood Type V Acromioclavicular Dislocations

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**Objectives:** Acromioclavicular (AC) joint injuries are common and constitute approximately 9% of all shoulder injuries. Traditionally Rockwood Types IV, V, and VI AC dislocations are indicated for surgery, type III dislocations are controversial, and type I and II are treated non-operatively. Our objective is to determine the success of non-operative treatment in Type V AC dislocations in active duty service members who must continue to do push-ups, pull-ups, bear weight, and wear ruck-sacks among other demanding activities requiring upper body strength in order to maintain current employment and lifestyle.

**Methods:** A retrospective review was conducted using an automated search of electronic patient medical records from March 2007 through March 2012 for patients diagnosed with an AC dislocation in the Tripler Army Medical Center Department of Orthopedics. Patients were excluded who were not active military at the time of injury or who were tertiary referrals. Radiographs were reviewed and comparison was made to the contralateral shoulder. A Type V injury was defined as greater than 100% increase in the coracoclavicular distance compared to the contralateral side or greater than 2cm of displacement unilaterally. Acute repair was defined as repair within 90 days without a trial of conservative therapy. Failure of conservative therapy was defined as being unable to return to full duty. A good outcome was defined as a return to full duty without limitations.

**Results:** 103 patients were identified with 60 patients having a bilateral shoulder films. Normal CC distances of the uninjured shoulder ranged from 4.3 mm to 18.66 mm with a mean of 9.09 mm and a standard deviation of 2.30 mm. 34 patients were Type V dislocations. 5 patients were tertiary referrals and were excluded. Acute surgical AC reconstruction was selected in 8 patients, initial conservative therapy in 21. In the conservative group: 11 patients (61%) returned to duty without surgery (average 97.8 days); 5 patients had delayed surgery and returned to full duty (average 135.2 days after surgery, 1 revision); 1 was medically separated for this injury; 1 was considered a failure and elected to change his career; and 3 patients were lost to follow up. In the acute surgical group: 6 patients returned to full duty in an average of 169.3 days after surgery (mean time to surgery 28.29 days) with 3 of those requiring revision surgery; 1 patient was lost to follow up, 1 patient failed to return to full duty. In the conservatively treated group, there was no association between failure rates and increase in CC distance or mm of displacement ( $p=0.32$  and  $0.69$  respectively).

**Conclusion:** While numerous studies have evaluated the operative versus non-operative treatment of type III injuries in both a prospective and retrospective manner, no study to date has reported on the conservative treatment of type V AC dislocations. In this study we report on conservative treatment being successful in a majority of patients and that the average time to return to duty was not improved in an acute versus delayed surgical intervention. While more study is needed, this suggests that type V AC dislocations may be given a trial of conservative therapy. Secondly we report on an increased range of the normal CC interspace (previously reported 1.1-1.3cm).

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