

Risk Factors for Recurrent Shoulder Dislocations

Having one shoulder dislocation is scary enough. But imagine having the shoulder pop out of the socket again -- or again and again. Recurrent shoulder dislocations is the subject of this study. Orthopedic surgeons from the Netherlands add their efforts and expertise to many others looking for risk factors for recurrent shoulder dislocations.

Previous studies have pointed to young age, male sex, and long delay between injury and surgery as the main risk factors for recurrent shoulder dislocations. Other studies have suggested the number of preoperative dislocations as being another possible risk factor for future dislocations. Participation in contact sports may be a risk factor as well.

In this study, the role of suture anchors in recurrent shoulder dislocations is explored. Suture anchors are the type of "stitches" that are used to reattach the torn tendon and capsule back to the shoulder socket. There has been some awareness that a low number (less than three) of suture anchors used might contribute to an increased risk of recurrent shoulder dislocations.

In addition to looking at the number of suture anchors compared with shoulder dislocations, the authors also re-evaluated the other known risk factors (e.g., age, sex, more than six months between injury and surgery) for their patient population. There were 67 patients (mostly professional or recreational athletes) in the study. They were all treated by the same orthopedic surgeon.

Shoulder instability was caused by a traumatic event in all cases. Surgery to repair the damage was done for everyone arthroscopically using suture anchors. The suture anchors were absorbed by the body and therefore did not have to be removed. Details of the surgical procedure are provided in the article for surgeons interested in how the author performs his surgeries.

After surgery, everyone was placed in a sling to immobilize the shoulder for six weeks. Then they all participated in a rehab program directed by a Physical Therapist. Return to sports activities was allowed when the athletes were deemed "ready" by the surgeon and therapist (usually four months after surgery).

Telephone surveys and written questionnaires were used as the main tools to evaluate results. The main interest was if any (and how often) shoulder dislocations occurred after surgery. Overall shoulder function was also evaluated. The patients were followed-up for 10 years to give an idea of intermediate results.

Ten years after the surgery, more than one-third (35 per cent) of the group had at least one redislocation. The number of cases was divided equally over time (an equal number occurred during the first two years, two to five years after surgery, and more than five years after surgery).

Two factors showed as being possible risk factors but without statistical significance. These included using less than three suture anchors and the presence of damage to the labrum. The labrum is an extra layer of fibrous cartilage around the shoulder socket that helps keep the head of the humerus (upper arm bone) stable in the socket.

In the group who had a shoulder redislocation after surgery, two-thirds had been repaired with only two suture anchors. None of the other reported risk factors were found to be influential in this study. One other observation was noted: athletes involved in overhead sports actually had fewer shoulder redislocations compared to other sports participants. The authors suggest perhaps these athletes had better muscle control or proprioception (sense of joint position) to explain the difference.

Although many studies have been done looking at risk factors for recurrent shoulder dislocation, this may be the first long-term (10 years or more) study to report on the role of suture anchors. The results confirm what surgeons know now that they didn't know 10 years ago: two (or less) suture anchors simply aren't enough to hold the shoulder. The need for at least three suture anchors is confirmed by the results of this study.

Two other comments of interest were made by the authors. First, as might be expected, patients who do not ever redislocate have better shoulder function compared with those who do experience a redislocation. And second, redislocation doesn't always occur right away. More than half in this study didn't happen until at least two years had passed since the surgery. Continued study is needed to better understand this second phenomenon.

Reference: Just A. van der Linde, MD, et al. Long-Term Results After Arthroscopic Shoulder Stabilization Using Suture Anchors. An 8- to 10-Year Follow-up. In *The American Journal of Sports Medicine*. November 2011. Vol. 39. No. 11. Pp. 2396-2403.