

Biceps Tendon Ruptures in Both Arms

Biceps tendon ruptures in both arms may not be as uncommon as was once thought. According to this study, up to eight per cent of adults may experience bilateral (both sides) distal biceps tendon ruptures. The damage doesn't occur in both arms at the same time. Usually the biceps tendon in one arm ruptures and then some years later the patient has the same thing happen in the other arm.

The biceps muscle is located on the upper arm. It mainly flexes or bends the elbow but also supinates the forearm (turns the hand palm up). It is a large and very strong muscle -- the first one many children learn to "flex" to show their strength.

So what's going on for these individuals? Is it a fluke that they tear both biceps muscles? Or is there some reason why they would experience the same type of injury on both sides? By taking a backward look at this large case series (321 patients), the authors of this article may have some new insight to share about this problem.

They found that most (92 per cent) of the bilateral ruptures occurred in men as a result of lifting heavy loads. One-third of the group was involved in heavy manual labor at the time of the injuries. In a smaller number of cases, women were affected but without a known cause. The fact that these people had a second biceps rupture on the other side suggests that even the first injury was more than just an injury.

Surgeons think there may be some anatomical reason why the biceps tendons in these patients give way. There may be a load involved but some pathologic change in the tendon puts it at increased risk for injury.

Exactly what that anatomic change may be is still unknown. Some experts suggest an extra lip of bone where the tendon attaches may be the culprit. Or in some people, there may be an area of decreased blood supply just above where the tendon pulls away from the bone. Examination of the torn tissue under a microscope has revealed some degenerative changes in some cases.

Other studies have reported additional risk factors including smoking (nicotine use) and the use of anabolic steroids (illegal use of steroids to bulk up muscles). Those risk factors were not heavily represented in this patient population.

Whatever the cause, this study confirms it's more than a coincidence that bilateral distal biceps ruptures occur. Patients who have the first biceps tendon rupture may be at increased risk for injury to the other arm. More study is needed to fully identify predictive risk factors that might help with prevention of these injuries.

Reference: Jennifer B. Green, MD, et al. Bilateral Distal Biceps Tendon Ruptures. In *The Journal of Hand Surgery*. January 2012. Vol. 37A. No. 1. Pp. 120-123.