

Surgeons Shifting Toward Arthroscopic Shoulder Surgery

The debate over whether arthroscopic surgery is superior to open incision for the shoulder continues. In this fresh look, records from the American Board of Orthopaedic Surgery (ABOS) were used to look for trends in surgeon practice. Starting in 2003 and going through 2008, data was analyzed to compare these two approaches when doing a procedure called the Bankart Repair for shoulder instability.

Shoulder instability means that the shoulder joint is too loose and is able to slide around too much in the socket. In some cases, the unstable shoulder actually slips out of the socket. If the shoulder slips completely out of the socket, it has become dislocated. If not treated, instability can lead to arthritis of the shoulder joint.

The most common method for surgically stabilizing a shoulder that is prone to anterior dislocations is the Bankart repair. In the past, the Bankart repair was done through a large incision made in the front (anterior) shoulder joint. This required damage to a great deal of normal tissue in order for the surgeon to be able to see the damaged portion of the joint capsule. The procedure was difficult and usually involved an attempt to sew or staple the ligaments on the front side of the joint back into their original position.

The arthroscope has changed all that. This special surgical tool gives the surgeon the ability to see inside the joint. The surgeon can then place other instruments into the joint and perform surgery while watching what is happening on the TV screen.

The arthroscope lets the surgeon work in the joint through a very small incision. This may result in less damage to the normal tissues surrounding the joint, leading to faster healing and recovery. If the surgery is done with the arthroscope, patients often go home the same day. Complications such as nerve damage or recurrent dislocation can still occur despite the method of repair. But the rate of problems is reportedly lower with arthroscopy compared with open incision.

Using the data from the American Board of Orthopaedic Surgeons (ABOS), over 4500 patients were evaluated. The number of arthroscopic versus open Bankart procedures was compared. Number and type of complications were available. Even the surgeon's training and experience were scrutinized.

The reason for looking at the surgeon's information was to evaluate trends in education and practice. For example, some orthopedic programs don't even teach open repair techniques. The newer, more modern arthroscopic approaches have become standard. And as arthroscopic surgery has become more mainstream, more non-fellowship trained surgeons are performing these procedures.

What did the ABOS records reveal? First, of all the shoulder surgeries reported in the ABOS database, 8.6 per cent were Bankart repairs. Second, more arthroscopic Bankart procedures are being done compared with open Bankart repairs. Starting in 2003 (earliest time when records of this type were available), there was almost a 3:1 ratio between arthroscopic versus open Bankart technique.

Over time (from 2003 to 2008), the number of arthroscopic Bankart procedures continued to go up until there was a 90 per cent incidence of arthroscopic Bankart surgeries. And in that same time period the number of nonfellowship and nonspecialized surgeons performing arthroscopic Bankart procedures also increased significantly.

The authors conclude that their belief at the start of the study (that the majority of Bankart procedures are being done arthroscopically now) was confirmed. This trend is understandable given the improved surgical

techniques available with arthroscopy.

At the same time, studies have shown improved outcomes for patients having arthroscopic Bankart repairs compared with open repairs. They reported less pain, reduced deformities, improved function, and excellent patient satisfaction with the results.

And there were fewer complications with arthroscopic Bankart procedures. For example, the rate of postoperative dislocations was 0.4 per cent for arthroscopic surgery compared with 1.2 per cent for open incision repairs. The rate of nerve injuries was 0.3 per cent for arthroscopic Bankart repairs compared with 2.2 per cent with open repairs.

What are the implications of these findings? Orthopedic fellowship and residency programs may want to review the way they are training surgeons. Those that are still teaching only open Bankart procedures may want to shift to arthroscopic training. And it may be necessary to create a means of recertifying surgeons who use arthroscopic techniques.

Reference: Brett D. Owens, MD, et al. Surgical Trends in Bankart Repair. An Analysis of Data from the American Board of Orthopaedic Surgery Certification Examination. In *The American Journal of Sports Medicine*. September 2011. Vol. 39. No. 9. Pp. 1865-1869.