Shoulder Chondrolysis Can Be a Complication of Arthroscopy

BY BRUCE JANCIN

KEYSTONE, COLO. — Iatrogenic chondrolysis in young athletes has emerged in the past several years as a devastating complication of shoulder arthroscopy, shoulder specialists said at the annual meeting of the American Orthopaedic Society for Sports Medicine.

"We've learned over the last year or two that our routine treatments don't work in patients with chondrolysis. These people hurt no matter what you do, even if you do a full-on total shoulder replacement," according to Dr. David S. Bailie, a Scottsdale, Ariz., orthopedic surgeon.

Chondrolysis is the disappearance of articular cartilage through dissolution of the cartilage matrix and cells. Affected patients typically complain of a rapid increase and change in the nature of their shoulder pain occurring roughly 8-12 months after arthroscopic surgery. X-rays show a clear loss of joint space soon after the procedure. A true anteroposterior view of the glenoid, along with axillary views, is the most helpful image for diagnosing the condition.

"Think of chondrolysis as a chemical burn, like dipping something in acid. It's not really arthritis," Dr. Bailie explained. "Arthroscopy is not a good choice in chondrolysis for the simple reason that there aren't any loose bodies to remove. There isn't any cartilage left."

Circumstantial evidence has linked chondrolysis to arthroscopic procedures involving mishandling of thermal probes, the use of bioabsorbable labral fixation devices containing proinflammatory compounds such as polyglycolic acid, and—most significantly—postoperative use of high-volume intra-articular pain pumps to administer local anesthetic.

"This is our biggest nemesis now: pain pumps. Unfortunately, people all over the country are still using them. We're just starting to learn that this medicine we've used for half a century—local anesthetic—is extremely toxic to all human tissue," Dr. Bailie said.

He considers surgery when chondrolysis patients don't improve substantially after 3 months of conservative treatment such as NSAIDs, physical therapy, an intra-articular steroid injection, or intra-articular hyaluronic acid.

The best operation in these patients is often a stemmed arthroplasty, in some cases with a lateral meniscus allograft transplant on the glenoid.

"We've found out the hard way that resurfacing procedures don't work most of the time in chondrolysis. It probably has to do with the neural elements in the subchondral bone being affected. The chemical burn you get with chondrolysis often goes deeper than the articular cartilage.

"That's why I always get a planning MRI: If patients have any cystic changes in the bone, they have to have a stemmed arthroplasty—you have to cut the humeral head off. If they don't have any cystic changes, we've had some success with resurfacing; but most of the time they look like rheumatoid arthritis patients, with cysts on both sides of the joint," he said.

Todd Ellenbecker, a Scottsdale, Ariz., physical therapist with a quarter-century of experience, said one of the greatest challenges in his daily clinical practice is restoring scapular stabilization and rotator cuff strength in chondrolysis patients following arthroplasty.

He advocates passive and active assisted range-of-motion exercises aimed at establishing scapular stabilization. ■

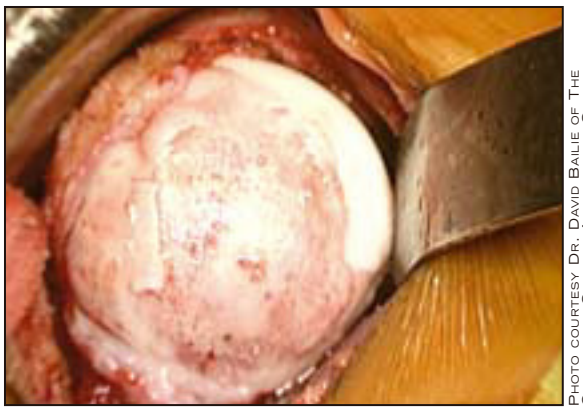

PHOTO COURTESY DR. DAVID BAILIE OF THE ORTHOPEDIC CLINICAL ASSOCIATION, SCOTTSDALE, AZ

The loss of articular cartilage (as above, around the humeral head) can occur after arthroscopy.