

Review of Osteochondritis Dissecans of the Capitellum Management

Physical Therapy in Fremont, Carbon, and Sweetwater Counties for Elbow

Attention Fremont Therapy Group patients suffering with elbow pain! This is a mid term report of a study of young athletes who have undergone surgical treatment for osteochondritis dissecans at the elbow. Check with your Physical Therapist out if your chronic elbow pain could be from osteochondritis dissecans.

Overuse injuries used to be seen mainly in adults, in injuries such as carpal tunnel syndrome, but as more children are participating in organized sports activities, doctors are starting to see overuse injuries in them as well. One such injury osteochondritis dissecans a condition that used to be seen most often in active boys, is affecting more girls now as their sports participation ranks. Osteochondritis dissecans is a disorder where there is a disruption in blood supply to the end of the bone, causing bone cells to die from malnutrition. In some cases, nothing happens, but in others, parts of the bone and cartilage come away from the end of the bone, causing pain and making the joint unstable. The injury is being seen more often at the elbow because of the forces of throwing a ball, for example.

Usually treatment is based on what the doctors find in x-rays and arthroscopic surgery, looking inside the joint with a camera. Different findings result in different classifications. One system described by Bradley and colleagues is described below.

- Type 1A lesions: intact/stable, intact cartilage, no loss of stability
- Type 1B lesions: intact/unstable, intact cartilage but some instability in the bone and imminent collapse
- Type II lesions: open/unstable, clear fracture (break) of the cartilage and collapse or partial displacement of the bone
- Type III lesions: detached, loose cartilage in the joint
- Type IV lesions: two areas where the head of the bone are changing, seen by x-ray

Treatment can be with surgery or non-surgical, although study findings as to non-surgical effectiveness contradict each other. Surgery involves a few different options, from arthroscopically removing the fragments or loose bits with or without cartilage reattaching tissue, etc. The authors of this article are in the midst of studying arthroscopic management of the injury and are presenting their mid-term findings.

The study involves 21 patients - 22 elbows, 10 treated by arthroscopic debridement (removing debris) and drilling, and 12 treated with additional mini-arthrotomies (bone removal) for bone grafting or the removal of larger loose bodies after arthroscopy.

Before the surgeries, the researchers obtained information about each patient's sex, age (average 13.1 years), which arm was operated on (16 right elbows), if it was their dominant hand (yes, in 18 patients) the type of injury, sport played, sport duration, duration of symptoms before surgery (average 10.2 months), any treatment tried before surgery and range of motion. After surgery, the researchers assessed range of motion, as well as follow up, how long it took to return to their sport, and any complications after surgery. Before the surgery, the most common complaint was pain in the elbow (72 percent), followed by catching or locking of the elbow (48 percent) and decreased range of motion (21 percent).

The patients were able to bend their elbows an average of 127.7 degrees and extend it -18.7 degrees before the surgery. After the surgery, they gained an average of 9.7 degrees for bending and 17.2 degrees for extension. All patients were able to use their elbows properly after surgery after a follow up of about 48 months, although five patients complained of limited

motion after the surgery and four reported pain after activities. Two of those patients did not return to their previous sport activity.

The patients were asked to rate their elbow function on a scale of zero percent to 100 percent after the surgery. The average rating was 87 percent and 18 of the 21 patients did return to their previous sport.

Reference: Kristofer J. Jones, MD, et al. Arthroscopic Management of Osteochondritis Dissecans of the Capitellum: Multicenter Results in Adolescent Athletes. In *Journal of Pediatric Orthopaedics*. January/February 2010. Vol. 3. No. 1. Pp. 8 to 13.