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Preventing and Treating
Injuries to the Elbow

The October issue of *Golden Hills News* was the first in a two-issue series on the prevention and treatment of elbow injuries. In October, we focused on elbow anatomy and highlighted the most common types of elbow injuries. This month, we delve into more detail about each injury condition and discuss our approach to improving patient recovery through physical therapy.

Sudden (Acute) Injuries

An acute injury may be caused by a direct blow, penetrating injury or fall, or by twisting, jerking, jamming or bending an elbow abnormally. Pain may be sudden and severe. Bruising and swelling may develop soon after the injury.

Elbow Dislocation

Typically, elbow dislocation results from falling on an outstretched or extended arm, most commonly as a result of a contact sport or a fall from a height. The patient experiences an immediate loss of range of motion (ROM) in combination with acute pain over the elbow surface. The elbow may also appear deformed.

Physical Therapy Treatment

After one week, the patient is fitted for a hinged elbow brace. Gentle active flexion and extension ROM exercises are performed under the supervision of a physical therapist. At three weeks post-reduction, the stability of the reduction will determine the course of therapy or bracing.

Elbow Fracture

Broken bones can occur around the elbow after injuries such as falls, sports injuries and car accidents. The most common elbow fractures are olecranon fractures and radial head fractures.

Fractures of the elbow cause acute pain, swelling, bruising and potential joint deformity. Elbow fractures need to be recognized and treated early to minimize long-term complications such as loss of elbow ROM and chronic stiffness.

Physical Therapy Treatment

Fractures generally occur in the unconditioned athlete who lacks the necessary amount of biceps and triceps strength to counterbalance the rotational stress or in athletes who have intrinsic bone weakness. Clear evidence of clinical and radiographic function must be noted before rehabilitation protocol is instituted. This protocol involves progressive ROM and strengthening of the entire upper extremity. The patient must regain normal ROM and strength before he or she can resume sporting activities.

Patient Tips

Signs You Should Call Your Doctor about Elbow Pain

- Inability to carry objects or use the arm
- Apparent deformity of the joint
- Elbow pain that occurs at night or while resting
- Elbow pain that persists beyond a few days
- Inability to straighten or flex the arm
- Swelling or significant bruising around the joint or arm
- Signs of an infection, including fever, redness and warmth

If you are unsure of the cause of your elbow pain or of the specific treatment recommendations, you should seek immediate medical attention.

Preventing and Treating Elbow Injuries (Continued)

Overuse and Chronic Injuries

Overuse injuries occur when too much stress is placed on a joint or other tissue, often by overdoing an activity. Chronic elbow injuries are typically the result of repetitive injuries, general inflammatory conditions and/or post-trauma. Patients often describe recurrent pain, stiffness or loss of ROM.

It is especially important to pay attention to overuse injuries in adolescents, as it is possible to miss potentially serious growth plate injuries in an exam or x-ray alone.

Lateral Epicondylitis (Tennis Elbow)

The most common cause of elbow pain is lateral epicondylitis, also called tennis elbow. Lateral epicondylitis is a result of microscopic tears and scarring of the extensor carpi radialis brevis tendon located on the lateral aspect of the elbow. Patients with lateral epicondylitis have pain over the outside of the joint and difficulty gripping objects.

Physical Therapy Treatment

Treatment includes rest from provocative movement and ice. A comprehensive rehabilitation program is initiated emphasizing strength and flexibility of the forearm extensors and flexors.

Strengthening is accomplished by initially using a 1 lb. dumbbell to perform extensions of the forearm with 3 sets of 10 repetitions per day. The weight is increased in increments of 1 lb. per week until the patient can easily lift 8 to 10 lbs. Flexion and flexibility exercises are simultaneously performed during the above protocol.

The patient is then allowed to start his or her desired activities. If playing a racquet sport, the patient should use a racquet with a larger head, increase the grip size and use string tension between 55 to 60 lbs.

Medial Epicondylitis (Golfer's Elbow)

Similar to lateral epicondylitis, medial epicondylitis, or golfer's elbow, causes discomfort around the joint. However, the symptoms of medial epicondylitis are on the inner side of the joint.

Medial epicondylitis is the result of chronic wrist flexion. It causes inflammation in the forearm flexor muscles and the pronator teres tendon. Pain is localized over the medial aspect of the elbow and is increased with wrist flexion.

Physical Therapy Treatment

Treatment begins with ice, rest from sports and repetitive activities, phonophoresis, and strengthening exercises. As strength improves, a counterforce brace is applied and activities are resumed. Then the patient performs exercises to improve biomechanics for work station or the desired sport.

Biceps Tendonitis

Inflammation of the biceps tendon results in pain over the anterior aspect of the elbow and is associated with recurrent flexion of the biceps muscle, such as with dips and bench pressing. Patients present with local tenderness over the biceps tendon, and there may be thickening of the tendon with muscle tightening of the biceps.

Physical Therapy Treatment

Treatment includes rest from throwing, NSAIDs and ultrasound. Once symptoms have decreased, longitudinal massage of the tendons and submaximal supination strengthening are performed.

Cubital Tunnel Syndrome

Cubital tunnel syndrome occurs when there is compression of the ulnar nerve where it wraps around the inside of the joint, causing elbow pain. Cubital tunnel syndrome can also cause shooting pain along the forearm and numbness and tingling of the fingers.

Physical Therapy Treatment

Treatment includes ice, ultrasound, TENS and gentle neuro tissue mobilization. The patient is taught proper biomechanics for overhead sports, including baseball, tennis, javelin throwing, gymnastics and football quarterbacking.

Radial Tunnel Syndrome

Radial tunnel syndrome is a condition that causes nerve compression of the radial nerve. Most often, this diagnosis is considered in patients who are thought to have lateral epicondylitis, but do not improve.

Physical Therapy Treatment

Similar to lateral epicondylitis.

While minor elbow injuries can be treated with NSAIDs, ice and rest, more serious injuries will require physical therapy as an important part of the overall patient care plan. At Golden Hills, we use different techniques to help injured patients increase strength, regain mobility and return to pre-injury levels of activity. Contact us today for more information: **(408) 274-0888**.