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SHOULDER, KNEE & SPORTS MEDICINE

Latissimus Dorsi Rupture

The latissimus dorsi muscle is a large and powerful muscle that covers a significant portion of the back and attaches to the arm near the shoulder joint. The latissimus is very active in adducting the arm during climbing or pull-ups. Occasionally, a patient may rupture the insertion of the latissimus dorsi muscle from the humerus (arm bone) near the shoulder. It is also possible to injure the muscle or the tendon in the mid-substance. This may occur with a forced jerk of the arm such as in water skiing or with an eccentric (elongated) force as in the follow-through phase of throwing.

Frequent Signs and Symptoms

- A pop, rip, or tearing sensation combined with severe or sharp, often burning, pain in the armpit or upper back at the time of injury
- Tenderness, swelling, warmth, and/or redness over and around armpit, side, and back
- Bruising that develops several days after injury
- Pain when trying to raise the arm, weakness trying to pull down or extend the arm
- Loss of contour of the posterior armpit region and a bulging below the shoulder blade
- Loss of firmness when pushing on the area where the tendon ruptured (a defect between the ends of the tendon and bone where they separated from each other)

Etiology (Causes)

- Sudden episode of strenuous activity
- Direct blow or jerk to the arm
- Eccentric overload in throwing

Risk Factors

- Excessive climbing, hanging, pull ups
- Wrestling
- Poor physical conditioning (strength and flexibility)
- Previous tendinopathy
- Oral anabolic steroid use



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Prevention

- Appropriately warm up and stretch before practice and competition
- Allow time for adequate rest and recovery between practices and competition
- Maintain appropriate conditioning:
 - Cardiovascular fitness
 - Shoulder flexibility
 - Strength and endurance

Outcomes

Complete latissimus dorsi ruptures do not heal on their own and may be treated with or without surgery. Most patients can return to activity within weeks without surgery. Patient who wish to restore their latissimus strength and function require surgery and return to higher level athletic activity after 6 to 9 months recovery time.

Potential Complications

- Weakness of the latissimus dorsi, especially untreated
- Re-rupture of the tendon after surgical repair
- Prolonged disability
- Risks of surgery, including infection, injury to nerves (numbness or weakness), bleeding, hematoma, pseudocyst, shoulder stiffness, shoulder weakness, and pain with strenuous activity
- Loss of back or armpit contour
- Inability to repair rupture

Treatment Considerations

Initial treatment consists of rest and icing the injured area. A sling may be given for comfort. Lesser partial latissimus dorsi tendon injuries may be treated conservatively with shoulder exercises completed under the supervision of a physical therapist or athletic trainer. Treatment of complete tears is somewhat controversial. Tears in the mid-belly and at the muscle-tendon junction are not favorable to repair. For the active athlete with a tear at the bony insertion, surgical reattachment of the tendon to the humerus is a treatment option. Depending on the needs of the athlete, good functional outcomes have been reported with surgical or nonoperative treatment. Without surgery, the loss of normal armpit contour and some weakness of the shoulder will persist. Repair within the first few weeks provides a better result and is technically easier to perform. After surgery and immobilization for six weeks, physical therapy is needed to regain shoulder motion and strength.



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Possible Medications

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within seven days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Pain relievers may be prescribed by your physician. Use only as directed and only as much as you need.

Modalities (Cold Therapy)

Cold is used to relieve pain and reduce inflammation. Cold should be applied for 15 to 20 minutes every two to three hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage with a cloth between the ice and your skin to prevent burning /freezing your skin.

Notify My Office If Symptoms Worsen



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