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Perspective

Tenodesis: Key Insights into Tendon Reattachment Surgery and Recovery

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DESCRIPTION

Tenodesis is a surgical procedure that involves the reattachment or stabilization of a tendon to a bone. This technique is often used to treat tendon injuries and conditions that cause chronic pain or dysfunction. By securing the tendon, tenodesis can restore function and alleviate discomfort. Tenodesis is often performed in combination with other treatments like physical therapy for optimal recovery.

Indications for tenodesis

Tenodesis is typically recommended for patients with certain tendon injuries or conditions that do not respond to conservative treatments. Common indications include:

Biceps tendonitis and tendon rupture: Chronic inflammation of the biceps tendon or a complete rupture can lead to significant pain and functional impairment. Tenodesis is often performed to address these issues.

Rotator cuff tears: In cases where the rotator cuff tendons are severely damaged and cannot be repaired directly, tenodesis can help stabilize the shoulder.

Achilles tendon injuries: Severe Achilles tendon injuries that do not heal properly may require tenodesis to restore function and strength.

Wrist tendon disorders: Conditions like De Quervain's tenosynovitis or chronic wrist pain due to tendon issues can be treated with tenodesis.

Patellar tendon injuries: Chronic patellar tendon pain or rupture can be addressed through tenodesis to improve knee stability and function.

The tenodesis procedure

The specific steps of a tenodesis procedure vary depending on the tendon involved and the underlying condition. However, the general principles remain consistent. Here's an overview of a typical tenodesis surgery.

Preoperative preparation: Before the surgery, patients undergo a thorough evaluation, including imaging studies like MRI or ultrasound, to assess the extent of the tendon injury. The surgeon discusses the procedure, risks and expected outcomes with the patient.

Anesthesia: Tenodesis is usually performed under regional or general anesthesia, depending on the tendon's location and the patient's overall health.

Incision and exposure: The surgeon makes an incision over the affected area to access the damaged tendon. The size and location of the incision depend on the specific tendon being treated.

Tendon mobilization: The surgeon carefully mobilizes the tendon, freeing it from any surrounding scar tissue or adhesions. This step ensures proper alignment and tension during reattachment.

Bone preparation: The surgeon prepares the bone to which the tendon will be attached. This may involve drilling a small hole or creating a groove to secure the tendon.

Tendon fixation: The tendon is then anchored to the bone using sutures, screws, or anchors. The choice of fixation method depends on the tendon and bone quality.

Closure: After securing the tendon, the incision is closed with sutures or staples and a sterile dressing is applied.

Recovery and rehabilitation

The recovery process following tenodesis varies depending on the tendon involved and the patient's overall health. However, general principles of postoperative care and rehabilitation include:

Immobilization: Immediately after surgery, the affected area is typically immobilized using a splint, cast, or brace to protect the repair and allow initial healing.

Pain management: Pain and inflammation are managed with medications, including Nonsteroidal Anti-Inflammatory Drugs (NSAIDs) and analgesics.

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Physical therapy: A structured rehabilitation program is necessary for restoring function and strength. Physical therapy usually begins with gentle range-of-motion exercises and progresses to strengthening exercises as healing allows.

Gradual return to activity: Patients are advised to avoid heavy lifting, strenuous activities and sports until the tendon has fully healed. The timeline for returning to normal activities varies but can range from several weeks to several months.

Follow-up care: Regular follow-up appointments with the surgeon are necessary to monitor healing progress and address any complications promptly.

Potential complications

As with any surgical procedure, tenodesis carries some risks. Potential complications include:

Infection: Surgical site infections are rare but possible. Proper wound care and hygiene are important to minimize this risk.

Tendon re-rupture: There is a risk of the tendon re-rupturing, especially if postoperative instructions are not followed or if there is excessive strain on the repair.

Stiffness and loss of range of motion: Some patients may experience stiffness or reduced range of motion in the affected joint. Physical therapy helps mitigate this risk.

Nerve injury: Nerve damage can occur during surgery, leading to numbness, tingling, or weakness in the affected area.

Tenodesis is a valuable surgical procedure for treating various tendon injuries and conditions that cause chronic pain and dysfunction. By reattaching or stabilizing the tendon, tenodesis can restore function, reduce pain, and improve the overall quality of life for patients. While the procedure carries some risks, proper preoperative evaluation, surgical technique and postoperative care can significantly enhance outcomes.