Intraoperative Stretching Release of Chronic, Complete Proximal Hamstring Tendon Avulsions With Extended Retraction

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Background

Hamstring injuries represent one of the most common injuries among athletes, with an important prognostic indicator being time to surgical repair because chronic repairs typically are complicated by dense, fibrotic scar tissue, adhesions, and possible sciatic nerve entrapment. Given the reported inferior outcomes and technically difficult procedure, a clinical demand exists for an effective intraoperative method for adhesion disruption and tendon mobilization during repair of chronic, complete proximal hamstring avulsions with extended retraction. The goal of this technical video is to introduce an approach that includes knee hyperflexion with hip extension, followed by slow, progressive knee extension and hip flexion while manually anchoring the proximal tendons. As a result, the intratendinous adhesions and scar tissue surrounding the hamstring muscles are released, allowing for tendon reattachment to the ischial tuberosity.

Description

This technique emphasizes an intraoperative method for manual hamstring muscle extension that releases chronic adhesions to mobilize the proximal tendons back to the ischial tuberosity attachment site. The approach includes knee hyperflexion with hip extension, followed by slow, progressive knee extension and hip flexion while manually anchoring the proximal tendons. As a result, the peritendinous and intratendinous adhesions are disrupted, releasing the retracted hamstring tendons and allowing for tension-free repair. Notably, this method can avoid the necessity of an extended incision down the posterior thigh to lyse distal muscle adhesions. In addition, this technique provides surgeons with an intraoperative process for releasing chronic, substantially retracted hamstring tendons before proceeding with more complex repair methods, such as allograft reconstruction, thus avoiding the increased risk of potential complications and additional surgical time. Given the complex aspects of retracted hamstring tendons, this release technique fulfills the clinical demand for an intraoperative process that promotes chronic adhesion disruption and tendon mobilization.