5

TREATMENT OPTIONS FOR RECTUS FEMORIS AND PROXIMAL ADDUCTOR AVULSIONS

Orava S

Hospital NEO, Naantali, Finland

Rectus femoris avulsions from the lower anteror iliac spine are rare injuries. They have been seen after severe falling or impact injuries, in downhill skiing, in track and field athletes, in contact ball sports and specially in soccer players.

The avulsions can be partial or total. In total tears the symptoms clear: big hematoma, weakness, and in muscle contraction defect under the groin and bulging of the muscle distally. Big hematoma may interfere with the clinical diagnosis. In Magnetic Resonance Imaging (MRI) the lesion is well seen and with ultrasound echography suspected. In partial tears too short rest results to recurrences, stretching of the proximal rectus femoris or a total tear develops.

If the diagnosis of a total proximal avulsion is done, surgical treatment is recommended early. The refixation is done with strong bone /suture anchors and nonabsorbable suture material (Fiberwire, Orthocord or else). From one to three anchors are usually needed. In operation it is difficult to differ the direct tendon and obligue tendon. We prefer to fix rectus femoris to the site of the direct tendon insertion.

In long lasting partial tears ectopic calcification may grow at the site of anterior inferior iliac spine. It is excised in surgery. Postoperatively crutches are needed only one week andfull weight bearing can be allowed in a few days. Rest for 2-3 weeks is needed and walking, swimming, water and gym exercises are started after that. Physiotherapists close control is often required to keep the gradual increase in adding strength, endurance, speed, elasticity, balance and coordination. Running and kicking is usually possible in 2-3 months and ability to play soccer in 3-4 months.

Adductor muscle or tendon insertion avulsions from pelvis are also relatively rare injuries. Mild tears and adductor overuse syndromes are seen often. The most severe avulsion injuries we have been seen and treated in alpine skiers.

Adductor longus, brevis and magnus with gracilis and recti abdomini muscle avulsions and/or conjoined tendon tears have been treated surgically. The most common total tear is adductor longus avulsion. The exact diagnosis can be done only by MRI examination. Early operation with anchor fixation can be done. If there has been a longlasting adductor pain syndrome tenotomy of the adductor longus tendon 4 cm distally from the insertion. In chronis tears adductor longus can besutured to the other adductor tendons and muscles. Ectopic calcification may grow after periosteal lesions and into big hematomas, which need to be emptied during operation. In large tears several anchors are needed.

Healing of total avulsions is fast. Normal life can be lived 2- 3 weeks after surgery. Rehabilitation is also started at that time. Running and ball training is possible in two months and playing ability in soccer is achieved in 3-4 months, depending on the site and size of the avulsions.