OrthopedicNotes
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ILIOTIBIAL BAND SYNDROME

Iliotibial band syndrome (ITBS) is the most common cause of lateral knee pain in runners and walkers, with an incidence as high as 12% of all running related overuse injuries.[1] ITBS results from recurrent friction of the iliotibial band (ITB) sliding over the lateral femoral epicondyle.

ANATOMY AND FUNCTION

The iliotibial band is the continuation of the tendinous portion of the tensor fascia latae muscle. It also attaches indirectly to parts of the gluteus medius, gluteus maximus, and the vastus lateralis muscles.

An intermuscular septum connects the ITB to the linea aspera femoris until just proximal to the lateral epicondyle of the femur.

Distally, the ITB spreads out and inserts on the lateral border of the patella, the lateral patellar retinaculum, and Gerdy's tubercle of the tibia. The ITB is only free from bony attachment between the superior aspect of the lateral femoral epicondyle and Gerdy's tubercle.[2]

A study of runners with ITB symptoms found that the posterior edge of the band was impinging against the lateral epicondyle just after foot strike in the gait cycle.[3] The friction first occurred at less than 30° of knee flexion.[4] Recurrent rubbing can produce irritation and chronic low-grade inflammation, especially beneath the posterior fibers of the ITB.

TREATMENT OF ITB SYNDROME

1. **A reduction in stressful activities** is necessary to allow the body to catch up with healing. Reduce the repetitive mechanical stress at the lateral femoral condyle.

2. **Contract-relax exercises** to lengthen shortened iliopsoas, rectus femoris, and gastrocnemius-soleus muscles are performed three times daily in three bouts of a 7-second submaximal contraction followed by a 15-second stretch (contract-relax procedure). Particular attention is given to increasing the length of the ITB.

3. **Chiropractic adjustments** for biomechanical imbalances and restrictions in the lumbopelvic region are usually necessary.

4. **Prescribe Foot Levelers Stabilizing Orthotics** to control underlying biomechanical faults. The most common problem seen is excessive pronation, which causes a variety of symptoms, but responds well to the use of flexible or semi-flexible orthotics.[5]

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