Iliotibial Band Friction Syndrome

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Types of Common Injuries

- Stress fractures
- Hamstring strain
- Iliotibial band syndrome
- Patellofemoral syndrome
- Shin splints
- Plantar fasciitis
- Achilles tendinitis

Why Do These Injuries Occur?

- Progressing too quickly in mileage and speed
- Lack of regular stretching
- Not changing out running shoes frequently enough
- Imbalance between opposing muscle groups

Anatomy

- Thick band of fascia that crosses the hip joint and extends distally
- Originates at iliac crest, tensor fascia lata, and M. gluteus max/med
- Inserts at Gerdy’s tubercle
- Helps stabilize the knee

Etiology

- During repetitive flexion and extension of the knee, the iliotibial band rubs over the lat. femoral epicondyle
- Resulting an irritated and inflamed bursa
- Compression fat/connective tissue deep to ITB
- Chronic infl. ITB bursa

Predisposing Factors

Who’s at Risk?

- Most common in runners or cyclists
- Chronic overuse injury
- Sudden increase in mileage, training errors
- Changes in surfaces (i.e. soft to hard, flat to uneven etc.)
- Leg Length discrepancies (natural and artificial)
- Circular track running
- Weak hip flexors, adductors, and abductors, particularly weak gluteus medius
- Genu Varum
- Genu Valgus
- Thicker IT band
- Large lat. femoral epicondyle
- Overpronation (although recent studies do not support theory)
Clinical Presentation

- Diffuse pain, achiness, or burning over lat. femoral condyle
- Typically during last 20-30 degrees of extension (average 21º)
- May have pain just distal to Gr. trochanter
- Chronic Overuse Injury
- Injury progression not unlike that of tendonitis
  1º Pain only after exercise
  2º Pain during and after exercise
  3º Pain affecting ADL’s
- Pain becoming more painful, sharp, and localized as injury progresses

Aggravates

- Any movement that causes excessive friction of the IT band over the epicondyle!
  - Running down hills
  - Lengthening stride
  - Sitting for long periods of time with knee in flexed position

Clinical Presentation

Inspection
- Localized edema, if any

Palpation
- Most likely PT over lat. fem. epicondyle; however may present with pain, PT any where along IT band
- Snapping, crepitation over lat. femoral epicondyle

ROM and Strength

- Full ROM typically with pain at last 20-30º of extension
  - If there is a decrease in ROM, most likely from pt. apprehension (pain)
- Weak hip abductors (gluteus medius)
- Weak hip adductors and flexors

Clinical Dx - Special Tests

- Ober’s Test
  - Patient lies on side, unaffected side down
  - Flex unaffected hip and knee to 90 degrees
  - Abduct and extend affected leg
  - Adduct affected knee
  - Indication: IT band tightness
  - Positive sign: leg remains abducted while Pt.’s muscles relaxed

Clinical Dx - Special Tests

- Ober’s Test
Clinical Dx - Nobles Test
- Pt. supine, knee flexed 90°
- Apply firm digital pressure to lat. femoral epicondyle while passively extending knee
- Positive sign: Pain (typically around 20-30° flexion)
- Indication: ITBFS

Clinical Dx - Renee creak test
- Similar to Nobles Test:
  - Pt. is WB on affect limb on step stool
  - Place finger over lat. femoral epicondyle
  - Pt. bends knee into 30-40° flex
  - Positive sign: Pain
  - Indication: ITBFS

Clinical Dx - Thomas test
- Pt. supine, affected knee to chest
- Lower affect limb
- Positive sign: If affected limb abd’s as leg flexed to chest
- Indication: Tight IT band

Technical Dx - Imaging
- Radiography
- Ultrasonography (low cost!)
- MRI

Differential Diagnosis
- Biceps femoris tendinopathy
- LCL sprain or pathology
- Lat. meniscus tear
- PF syndrome
- Stress fx
- Lateral degenerative joint disease

Iliotibial Band Syndrome
- Prevention
  - Adequate stretching of the IT band
  - Massage therapy
  - Avoid hills, shorten stride, and run on alternate sides of road
Treatment

• Though recognizing the ITBFS isn’t difficult, treatment can be challenging.
• Treat symptomatically.

A study worth reading:
• On the Web at: http://www.physportsmed.com/issues/2000/02_00/fredericson.htm

Acute Phase

• Activity Modifications
  • If edema
    – NSAIDS, ice massage, phonophoresis, iontophoresis, ultrasound
    – Lasting longer than 3 days, corticosteroid injection

Subacute Phase

• Stretching
  – Hip Abd
  – Hip Add
  – Hip Flexors

• Myofascial Massage

Alternative Treatments

• IT band strap
• Arch tapping
• Orthotics
• Motion-control shoes

• If treatment unsuccessful, surgery is an option

Surgical Treatments

• Percutaneous release ITB
• Open surgical release
• ITB Z-lengthening

• Arthroscopic ITB débridement

ABSTRACT DEADLINE
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Thank You!