GROIN INJURIES IN SPORTS

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EVALUATION AND TREATMENT OF GROIN PAIN
GROIN INJURIES

CLINICAL PRESENTATION

AND

DIFFERENTIAL DIAGNOSIS
GROIN INJURIES

- Groin Stain
- High Groin Strain
- Gilmore’s Groin
- Hockey Players Hernia
- Slapshot Gut
- Athletic Pubalgia
- Sports Hernia
- Sportsman Hernia
DIFFERENTIAL DIAGNOSIS

REFERRED PAIN

Back-Herniated Disc

Back-Other

Kidney Stones
DIFERENTIAL DIAGNOSIS

Gastrointestinal

Genitouretal-testicle/prostate

Gynecological

Rheumatologic-Spondyloartropathy
Differential Diagnosis

Hip Disorders

- Osteoarthritis
- Labral tears
- Stress Fractures
- Synovitis/capsulitis
- Slipped capital femoral epiphysis
- AVN
- FAI-Cam/Pincer
DIFERENTIAL DIAGNOSIS

PELVIC DISORDERS

- Osteitis Pubis
- Stress fractures
- Avulsion Fractures
DIFERENTIAL DIAGNOSIS

NERVE ENTRAPMENTS

- Ilioinguinal nerve
- Obturator Nerve
- Lateral femoral cutaneous nerve
- Genital branch genitالفemoral nerve
DIFFERENTIAL DIAGNOSIS

CLASSIC GROIN INJURIES

- acute injuries
- insidious onset
ACUTE GROIN INJURIES

Muscle / Muscle-tendon/Avulsion

- Abdominal - rectus/obliques
- Adductor - adductors
  - gracilis
  - pectineus
- Psoas
INSIDIOUS GROIN INJURIES

- Posterior wall of the inguinal canal
- Tear of transversus abdominus
- Disruption of conjoined tendon (tendon of insertion of both internal oblique and transversus abdominus) dehiscence between tendon and the inguinal ligament
- Tear of internal oblique and external oblique aponeurosis of internal inguinal wall
INSIDIOUS GROIN INJURIES

- Tear external oblique aponeurosis
- Inguinal nerve entrapment
- Attenuation rectus abdominis
PATHOPHYSIOLOGY

- abdominal hyperextension
- thigh hyperabduction
- eccentric adductor contraction
PHYSICAL EXAMINATION

Isolate specific pathology
ADDUCTION
ADDUCTION
ADDITION/FLEXION
HIP FLEXION
PSOAS
PSOAS
HIP FLEXION
PSOAS
RECTUS/OBLIQUE
OBLIQUES/CONTRALATERAL
OBLIQUES/IPSILATERAL
TENDERNESS-INSERTION
CONJOINED TENDON
PECTINEUS
ADDITION/EXTENSION
MEDIAL HAMSTRINGS
IMAGING

- X-RAY
- ULTRASOUND
- MRI/MRA
- BONE SCAN
- EMG
IRONY OF GROIN PAIN

- POSITIVE FINDINGS: good results
- NEGATIVE FINDINGS: poor results
GROIN CLASSIFICATION

TOPER

UNDERS
TOPER

T-TRAUMATIC

O-ONE SIDE OF PELVIS

P-POSITIVE FINDINGS

E-ECCENTRIC OVERLOAD

R-REHABILITATION
UNDRS

U - UNKNOWN/INSIDIOUS ONSET
N - NEGATIVE FINDINGS
D - DIFFUSE PAIN/BOTH SIDES OF PELVIS
R - REHABILITATION
S - SURGERY
TREATMENT

- CONSERVATIVE
- SURGICAL
COSERVATIVE TREATMENT

MAKE SPECIFIC DIAGNOSIS

TREAT PATHOLOGY
REHABILITATION

- REDUCE INFLAMATION
- CORRECT PELVIC IMBALANCE
- REDUCE SCAR TISSUE
- RELEASE ADHESIONS
REHABILITATION

- STRENGTHEN CORE/PELVIS
- STRENGTHEN HIP/LEGS
- FLEXIBILITY
POTENTIATE REHAB

- ANTI-INFLAMMATORY MEDICATION
- CORTICOSTEROID INJECTIONS
- EXTRACAPORAL SHOCK WAVE THERAPY
- PLATELET RICH PLASMA
SUPPORT

- COMPRESSION SHORTS
- GROIN WRAP
Groin Injuries in Athletes

- operative treatment
- prevention
Groin Injuries - surgical repair

- Repair rectus sheath; external oblique
- Mesh - abdominal wall repair
- Release adductor tendon
Groin Injuries - surgical repair

- Aponeurosis of transversus abdominis muscle
- Cooper's ligament
- Spermatic cord retracted
- Right spermatic cord, retracted
- Mesh overlay
Groin Injuries - surgical repair
Groin Injuries - Post operative

- Rest six weeks
- Physiotherapy, soft tissue work
- Strengthening, core stability
Groin Injuries in Athletes

6 months excellent rehab.
diagnosis - investigation

90% good…

…but only 60% cured!

groin repair
post operative rehab.
prevention
PREVENTION

- Adductor/abductor strength < 80%
- History of previous groin injury
- Age
- Low number sport specific off-season training sessions
- Lower abdominal/core dynamic programs
Thank you