Caring for the Boys:
Management of Chronic Testicular Pain

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Course Description:
This session will address

1. Why the treatment of chronic testicular pain has remained such a frustrating quagmire for patients and the medical community
2. The anatomy of the abdominal wall and gonadal structures, and how they are intimately related through embryologic migration, fascial attachments and local innervation
3. Differential diagnosis of chronic testicular pain and treatment planning for these patients

Objectives:

1. Identify patient populations and activities that may be contributory to testicular pain as a result of sports or conditioning program
2. Understand how common musculoskeletal dysfunctions of the spine, abdominal wall, neurovascular, fascial, lumbo-pelvic-hip and muscular structures can manifest as testicular pain.
3. Become familiar with differential diagnosis and treatment options readily incorporated in an orthopedic, sports physical therapy clinics which may be implemented for patients with testicle pain.
4. Identify the three main red flags amongst patients with testicle pain and know appropriate referral indications for Urologists, Pain Management physicians and/or pelvic dysfunction physical therapists.

Introduction

Definition of CO, CSP
Chronic orchialgia is defined as an intermittent or constant testicular pain, unilateral or bilateral, lasting for over three months that interferes significantly with the patient’s daily activities to the point that he seeks medical attention (Davis)
- Better described as chronic scrotal content pain (Levine)
- EUA and ICS guidelines have adopted the term “scrotal pain syndrome” (Keoghane)
- Should be classified as a component of chronic pelvic pain (Planken, Quallich)

Etiology
- Defined testicular/scrotal causes
- Post trauma to include surgical
- Tumor
- Post infection
- Referred pain
  - Scrotal contents
  - Neurologic
  - Orthopedic
- Idiopathic
  - 25% of cases have no clear cut etiology (Davis, Fricker, Granitsiotis, Quallich)

➤ Occurrence
- Carries a significant burden
  - Financial due to lost work and patients seeing multiple practitioners (Doubleday, Quallich)
  - Quality of life secondary to impaired sexual function in men of all ages (Ciftci, Lutz)
- 350-400 cases /100,000 men (Strebel)
- Post vasectomy pain syndrome, 15-19% 5-7 years following surgery (Granitsiotis)

➤ Patient presentation
- Average age 45
- Usually unilateral, but can be bilateral
- Duration between 3-336 months
- Isolated or radiate to the groin, perineum, sacrum, LE
- Constant pain or intermittent
- Spontaneous or exacerbated by physical activity to include sitting
- Seen an average of 4.5 urologist
- Undergone between 4.7 to 7.2 procedures to include 1.6 surgeries (Granitsiotis, Kumar Parekattil, Planken, Quallich)

➤ Current medical course of treatment
- Medical evaluation by PCP or urology
  - History
  - Physical exam
    ♦ limited to genital region
  - Testing
    ♦ UA, Sonogram
- Conservative
  - NSAI medication
  - Antibiotics
  - Antidepessants, anticonvulsants
  - TENS
- Invasive
  - Spermatic cord blocks
  - Cord denervation
  - Vasectomy reversal
  - Epididymectomy
• Orchiectomy (Keoghane, Quallich, Singh, Strebel)

❖ Anatomy and Physiology
  ➢ Embryology
    ▪ Mesoderm origins
    ▪ Gonadal migration
  ➢ Abdominal
    ▪ Inguinal canal
    ▪ Internal oblique fascia
    ▪ Retroperitoneal structures
  ➢ Scrotal contents
    ▪ Testes
    ▪ Epididymis
    ▪ Spermatic cord
  ➢ Neural
    ▪ Lumbar plexus
    ▪ Sacral plexus
    ▪ Pudendal nerve
  ➢ Normal orientation and movement (Doubleday, Grey, Kumar, Holland, Hollinshead, Wesselman)

❖ Differential Diagnosis
  ➢ History
    ▪ Sports-including youth participation
      • Kicking
      • Falls
      • Recurrent groin/ Hamstring strains
    ▪ Lifestyle/occupation
    ▪ Trauma
    ▪ Bladder bowel, sexual function
    ▪ Dietary factors
      • 3 day diary everything in and out
    ▪ Stressors
    ▪ Medications/ Supplements
    ▪ Surgical (to include childhood)
      • Undescended testicle in infancy
      • Appendectomy at any age
      • Abdominal
      • Spine
  ➢ Red flags
    ▪ Testicular torsion
    ▪ Cancer
    ▪ Infection
    ▪ Narcotic use
  ➢ Post trauma
Surgical
- Post vasectomy pain syndrome
- Inguinal, femoral, umbilical hernia
- Appendectomy
- Rectal
- Prostate
- Hydrocele
- Abdominal wall
- Neural
  - Lumbar plexus
  - Radiculopathy
  - Pudendal nerve
- Abdominal wall
  - Overactive muscles: obliques, rectus, pyramidalis
  - Surgical scars
  - Fascia/ adhesions
  - Diaphragm
- Post infection
  - Epididymitis
  - GI/ dysentery
- Musculoskeletal
  - Hip pathology
    - Obturator internus, adductors, pectineus, iliopsoas
    - Labral tear
  - Pubalgia
  - Sacral torsion
  - Psoas/ iliopsoas trigger points
  - Thoracolumbar
  - Static and dynamic posture
- Pelvic floor tension
- Breathing and motor control

Treatment
- Clear thoracolumbar junction (Doubleday)
  - Vertebral
  - Neural
- Treat abdominal wall involvement (Hackney)
  - Scar tissue mobilization (Ashby, Ajumsha)
  - Trigger points (Anderson)
- Mobilization of visceral structures
  - Renal fascia
  - Inguinal canal
  - Spermatic cord (Ashby, Baty, Horton)
- Lymphatic return
- Lumbo-pelvic-hip complex
Management of Chronic Testicular Pain

- Manual therapy lumbo sacral involvement
- LAD/ MWM bilateral hips
- Pube manipulation and/or stabilization
- Normalize hip mechanics
- Open and closed chain
- Intramuscular Manual Therapy (IMT) Trigger Point Dry Needling (TDN)

- Pelvic Floor function
  - Down training
  - Trigger points
    - IMT/ TDN external
    - Internal
  - Coordination with high level exertion (Intra-abdominal pressure)/ return to sport specific demands

- Pain Education
  - Dietary
  - ANS function and cortisol
  - Pain neuroscience and education

- Motor control
  - Restore diaphragm breathing, abdominal wall excursion
  - Down-train internal oblique hyperactivity

- Home Program and Self Treatment
  - ROM
  - Stretching
  - Self-treatment
  - CNS quieting, pelvic rest
  - Breathing for rest and work
  - Correct posture and ergonomics

References


Greenman PE. Principles of Manual Medicine 2nd ed. Lipincott Williams & Wilkins, Baltimore, MD; 1996