RADY 417 Case Presentation

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Focused patient history and workup

• Previously healthy 31 year old male

• Presented to Family Medicine clinic with nodular, irregular tissue in proximal penile shaft in the setting of using a "ring" to cut off the circulation of his penis during sex with his wife.

• No significant pain or other systemic symptoms
Differential Diagnosis

- Sclerotic tissue from penile injury
- Peyronie’s disease
- Congenital ventral curvature
- Sclerosing lymphangitis (rare)
- Malignancy – epithelioid or angiosarcoma (rare)
List of imaging studies

• US scrotum and penis
US Penile Shaft – Transverse Axis

- Calcified plaques positioned along the ventral surface of the corpora cavernosa consistent with peyronie’s disease

CC = corpus cavernosa
CS = corpus spongiosa

2cm
• The largest calcification measures up to 5 x 3 x 2 mm positioned along the right corpus cavernosum
US Penile Shaft w/ Doppler

- Color dopplers show patent cavernous arteries in both transverse axis and longitudinal axis.
Patient treatment or outcome

- Patient was referred to urology for further management
Discussion: Imaging for Peyronie’s Disease

• The diagnosis of Peyronie’s disease can be made clinically.
• Imaging can be useful when diagnosis is uncertain even after history and physical.
• High-resolution ultrasonography is highly sensitive in detecting calcified plaques in the tunica albuginea.
• Can also quantify septal and intracavernous fibrosis.
• Color duplex is useful in assessing vascular status.
Discussion: Other Imaging Modalities

- **MR**
  - Better at detecting plaques at the penile basis
  - Can provide additional information about inflammatory changes
  - Should be used if concern for malignancy
  - Prior to corrective penile surgery

- **X-ray Mammography**
  - May show calcifications and the angle of the penis more accurately than US
  - Able to visualize all calcifications within one image
  - Benefits do not necessarily justify radiation exposure
Discussion: Peyronie’s Disease

• Pathogenesis
  • Likely multifactorial – genetic predisposition, trauma, tissue ischemia
  • Localized fibrotic plaque in the tunica albuginea resulting in penile deformity, mass, pain and often erectile dysfunction
  • Plaques can be fibrous, contain areas of calcification or be completely ossified
Discussion: Peyronie’s Disease

- Risk Factors
  - Family history, other fibromatoses (Duputren’s contractures or plantar fibromatosis), repeated genital/perineal injuries

- Clinical Manifestations
  - Curved deformity of the penis
  - Decreased penile length
  - Numbness or pain
  - Erectile dysfunction
Discussion: Treatment and Management of Peyronie’s

• If stable, mild curvature, with satisfactory erectile function, observation is an acceptable option

• Medical management
  • Collagenase - intralesional injections of enzyme that digests collagen
  • Pentoxifylline - PDE inhibitor which inhibits inflammatory proteins that lead to scar formation

• Surgical management
  • Shortening operations
  • Plaque excision or incision with grafting
  • Prosthesis implantation
Wrap Up

• Peyronie’s disease is a fibrotic disorder of the tunica albuginea whose pathogenesis is largely unknown
• US with color doppler is the best modality for diagnosis along with history and physical exam
• Medical management includes pentoxifylline or collagenase injections
• Surgery reserved for those refractory to medical management
References


