



# Peyronie's Disease

June 23, 2017

Floyd A Fried Advances in Urology Symposium

Brad Figler MD

Department of Urology

University of North Carolina-Chapel Hill



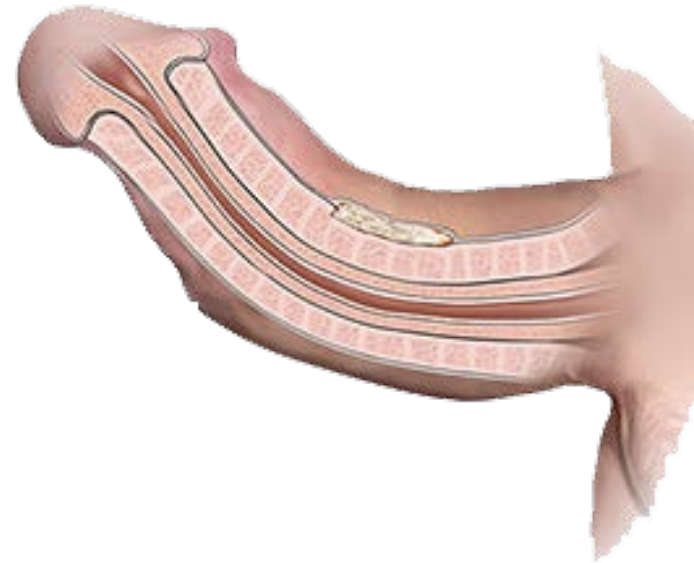
UNC  
SCHOOL OF MEDICINE

# OUTLINE

- Introduction
- Presentation and natural history
- History & physical exam
- Management – active phase
- Management – stable phase

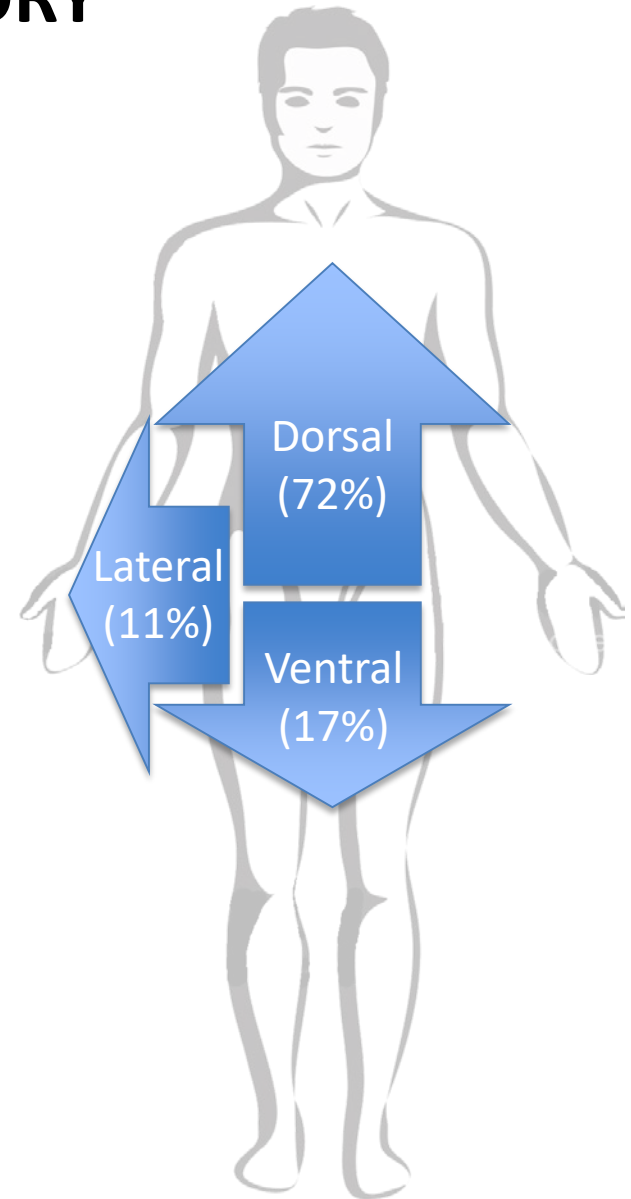
# INTRODUCTION

- Inelastic scar of the tunica albuginea secondary to trauma
- Prevalence: 3.2 to 8.9%
- Palpable scar
- Pain (secondary to inflammation)
- Erectile deformities:
  - Curvature
  - Shortening
  - Narrowing
  - Hinge effect



# PRESENTATION AND NATURAL HISTORY

- Curvature
  - Improves in 12%; worse in 48%
  - Usually stabilizes by 12 months
- Narrowing: 12%
- Unable to have intercourse: 22%
- Loss of penile length:
  - 84% over 18 months (mean 2cm)

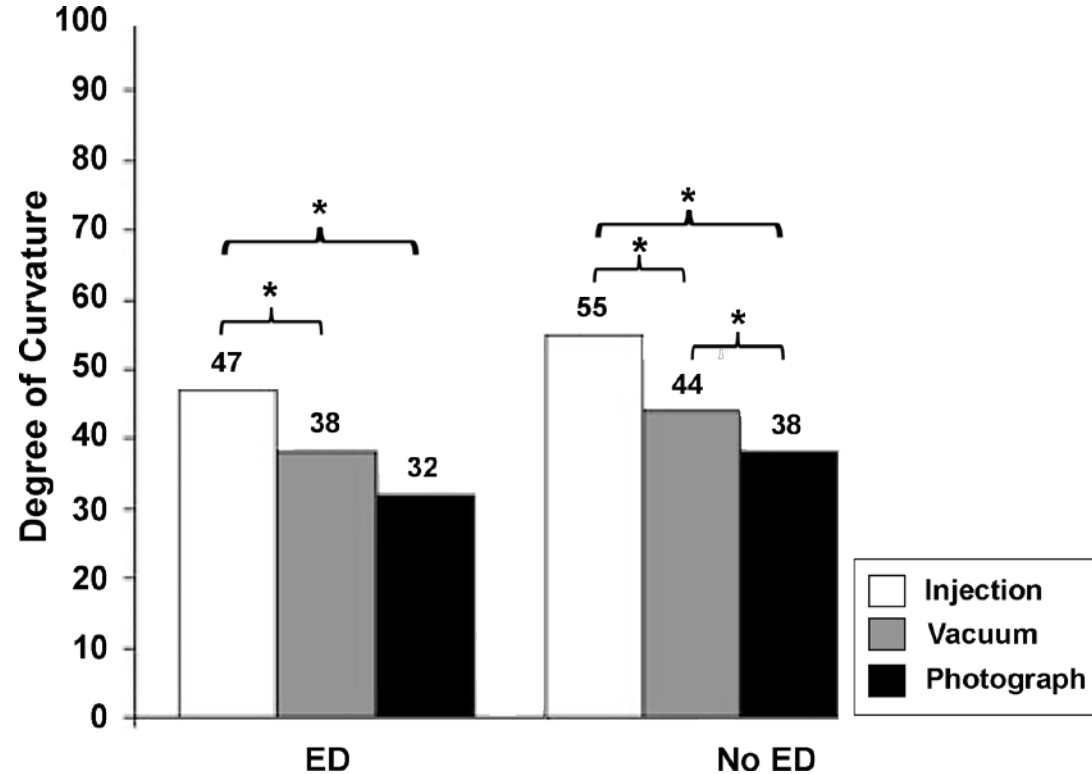


# DIAGNOSIS

- History
  - Curvature/narrowing/hinge
  - Change in deformity
  - Pain
  - Presence of ED
  - Loss of length
  - **“What’s your goal?”**
- Physical Exam
  - Stretched penile length
  - Plaques – location, size, tenderness
- Assess erectile deformity
  - When considering treatment
  - Most helpful in stable phase

# ASSESS ERECTILE DEFORMITY

- Intracavernosal injection
  - Measure curvature
  - Evaluate for narrowing, hinge, distal flaccidity
  - Evaluate erectile function
- Ultrasound
  - Characterize plaque
  - Other penile lesions
- Doppler for hemodynamics



# TREATMENT – ACTIVE PHASE (AUA GUIDELINES)

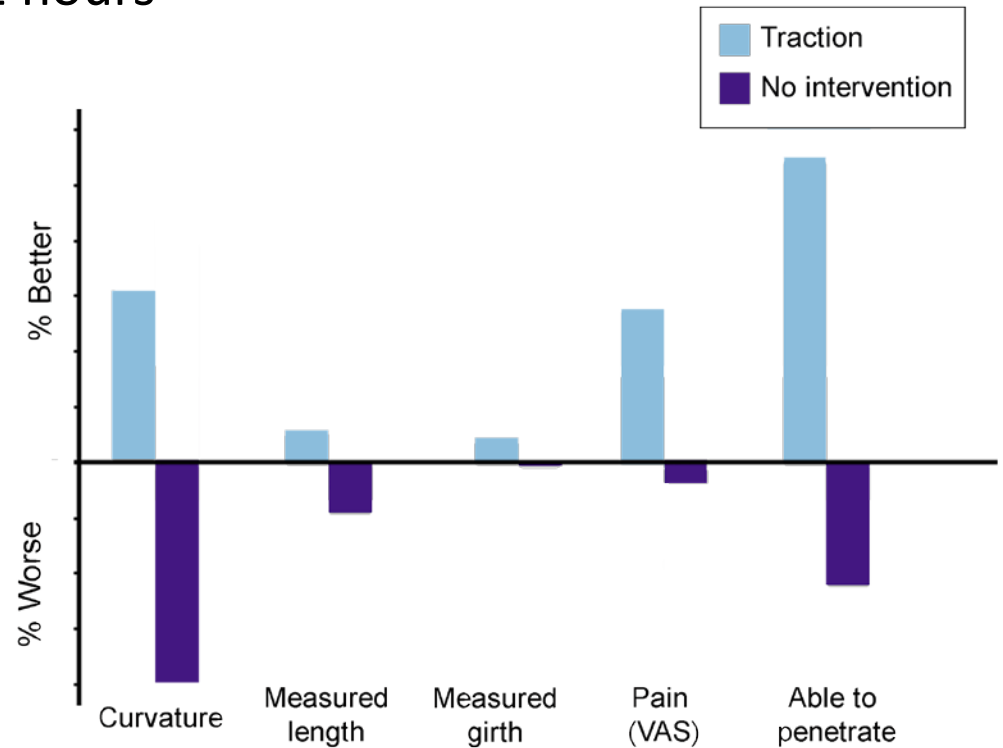
- NSAIDs for pain management

- May offer
  - Intralesional verapamil (weak evidence)
  - Extracorporeal shock wave therapy (ESWT) for pain (risk of adverse events, particularly increased pain)
- Not enough data: Colchicine, pentoxifylline, potaba, Co Q-10, topical Magnesium, topical verapamil, topical or intralesional LrhSOD, electromotive therapy, traction

- Do NOT offer:
  - Oral Vitamin E, tamoxifen, procarbazine, Omega-3 fatty acids
  - Electromotive therapy with verapamil
  - Radiotherapy
  - Extracorporeal shock wave therapy (ESWT) for curvature

# TRACTION FOR ACUTE PHASE PEYRONIE'S

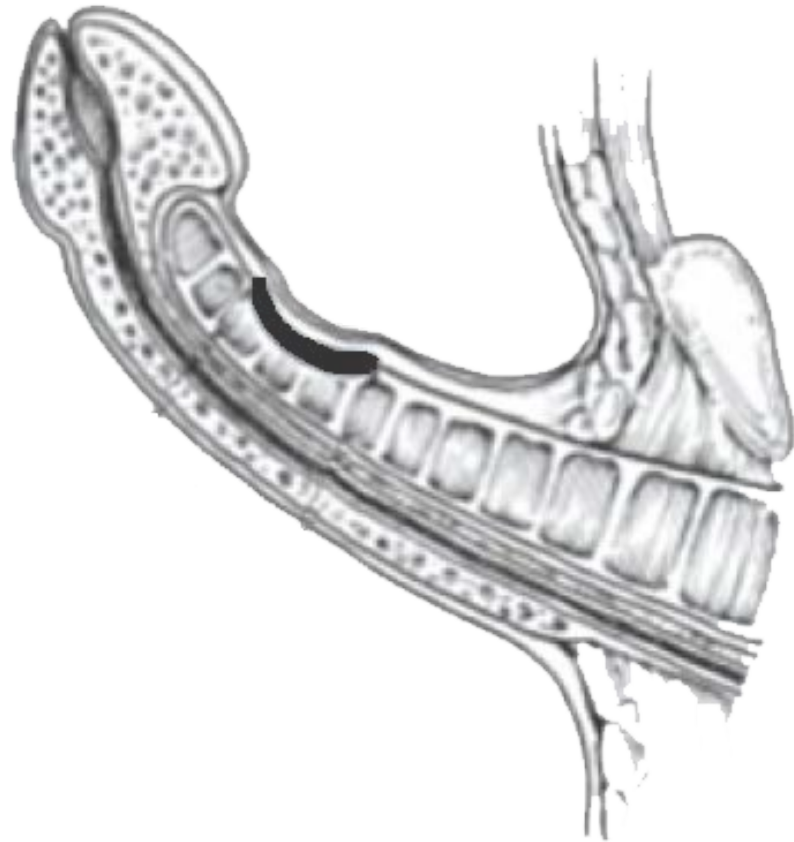
- N=55 (acute phase) vs N=41 (control)
- Traction 6-9 hours/day (not during sleep)
- Rest at least 30 minutes every 2 hours
- **Recommend because**
  - **Pts feel empowered**
  - **Downside is minimal**





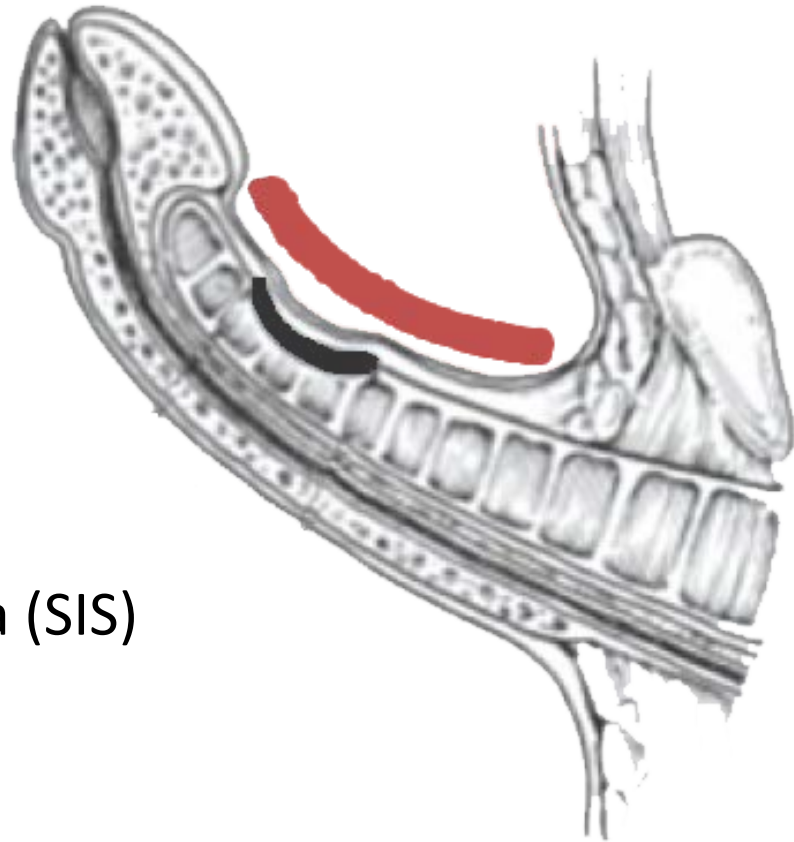
# TREATMENT – STABLE PHASE (AUA GUIDELINES)

- Intralesional therapy
  - Xiaflex
  - Interferon
- “Shortening”  
(e.g., Nesbit, plication)
- “Lengthening”  
(e.g., incision/excision + graft)
- Inflatable penile prosthesis (IPP)



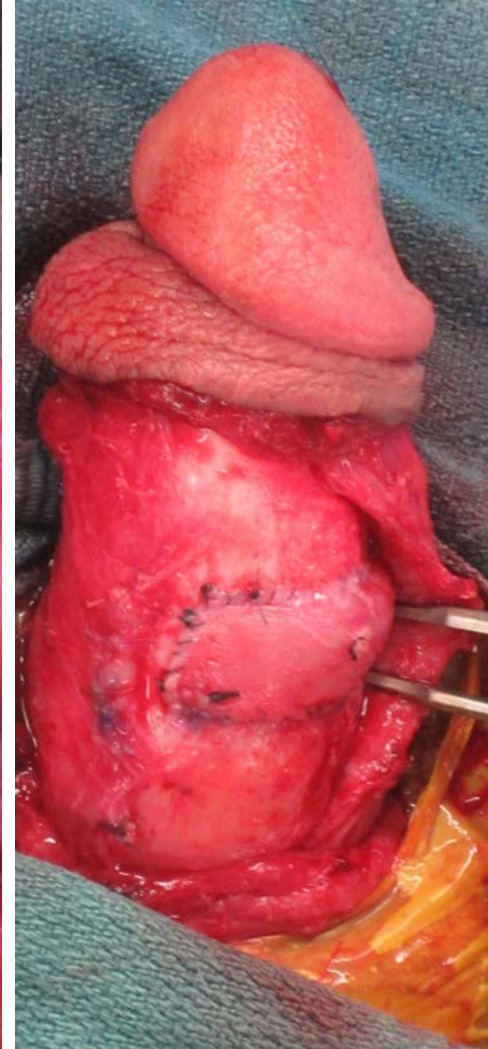
# “LENGTHENING” SURGERY

- Plaque is *excised* or *incised*; defect filled with graft
- Autologous
  - Temporalis fascia
  - Tunica vaginalis
  - Dermis
  - Saphenous vein
- Non-autologous
  - Cadaver pericardium
  - Bovine pericardium
  - Porcine small intestine submucosa (SIS)



# TUNICAL LENGTHENING

- Circumcising incision
- Elevate neurovascular bundle
- Incise plaque
- Apply graft

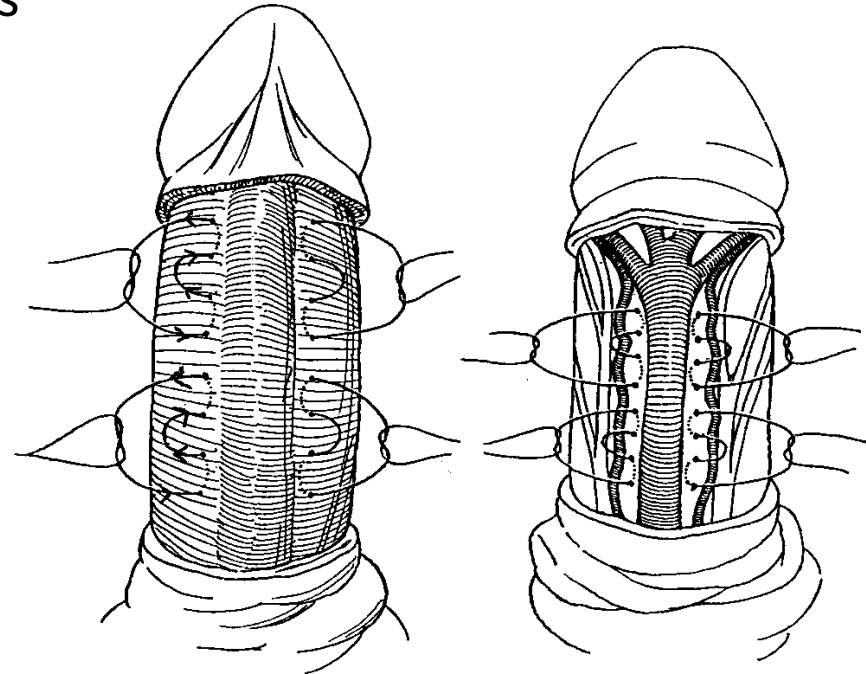


# INCISION AND GRAFT - OUTCOMES

- 3 studies (N=356, mean f/u 12-58 months)
- Effective for curvature: 79-91%
- Side effects
  - de Novo ED: 15-20%
  - Glans numbness: 9-17% (resolved in 80-100%)
- Length reduction
  - Measured: 29-33%
  - Subjective: 59%
- **Effective for curvature, but not a lengthening surgery**

# “SHORTENING” PROCEDURES

- Nesbit (1965): Resect tunica albuginea
- Saalfeld (1973): Heineke-Mikulicz
- Essed-Schroeder (1985): No tunica albuginea incision
- Lue (1992 & 2002): “No touch” 16-dots
- Hudak (2013)
  - Complex curvature
  - 2cm longitudinal incision



# PLICATION - OUTCOMES

- Baseline Curvature
  - Hudak: simple (51%), complex (42%)
  - Gholami: mean 64° (range 30°-120°)
- Effective for curvature: 93-96%
- de Novo erectile dysfunction: 3%
- Measured penile length decrease: 16%
- Perceived loss of penile length: 78%
- **Effective for curvature with minimal side effects/shortening**

Hudak et al (J Urol, 2013). Gholami et al (J Urol, 2002)

# PLICATION – ADVERSE EVENTS

- Bother from suture knots: 12%
- Pain with erection: 11%
- Decrease in penile sensation: 6%
- Hematoma: 4%
- Rare
  - Dysuria/urinary retention
  - Phimosis

# PLICATION VS GRAFT – HEAD TO HEAD STUDIES

	Plication	Graft
N	87	101
Pt reported curvature	No difference	No difference
Rigidity	↓ in 19%	↓ in 32%; 50%
Measured length	↓ in 18%	↓ in 33%

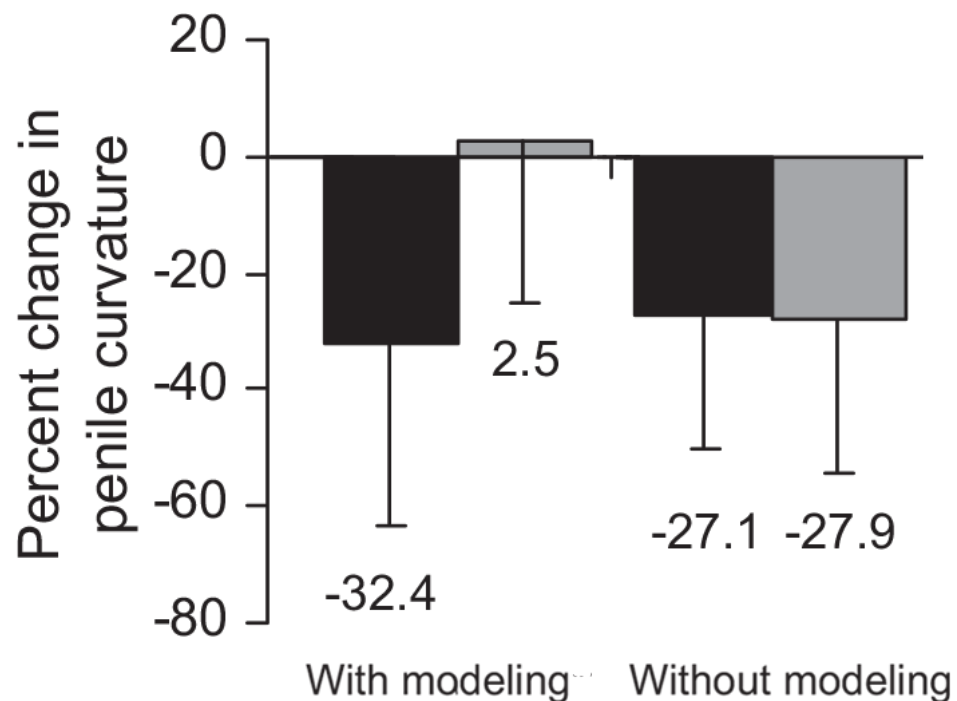
- Plication and graft are both effective for curvature
- Plication less morbid

Kim et al. J Urol (2008). Taylor et al. J Sex Med (2008)



# XIAFLEX

- FDA approved 2013: Palpable plaque, stable,  $\geq 30^\circ$
- 2 injections Q6 weeks x 4
- Improvement: 32.4% (17.5°)
- Modeling is necessary
- Adverse events
  - Bruising (87%%)
  - Edema (45%)
  - Pain (52%)
  - Rupture (0.5%)



# XIAFLEX: POST-APPROVAL PROVIDER SURVEY (n=100)

- Protocol modifications
  - Compressive dressing: 63%
  - Anti-platelet/anti-coagulation: 46%
  - Patient modeling: 89%
  - Penile stretching device: 39%
- Corporal rupture: 34% (median 5, range 0.5 – 30) days
  - Cause
    - Vigorous intercourse (38%)
    - Nocturnal erections (31%)
  - Surgical intervention: 67%
- **Effective (~30% improvement), safe, well tolerated**

# TRACTION AFTER PEYRONIE'S SURGERY

- Post-op: Traction vs control
- Mean length change (post-op vs pre-op)

	Traction	No traction	P Value
Plication	0.9	0.5	<0.001
Graft	1.5	0.2	<0.001

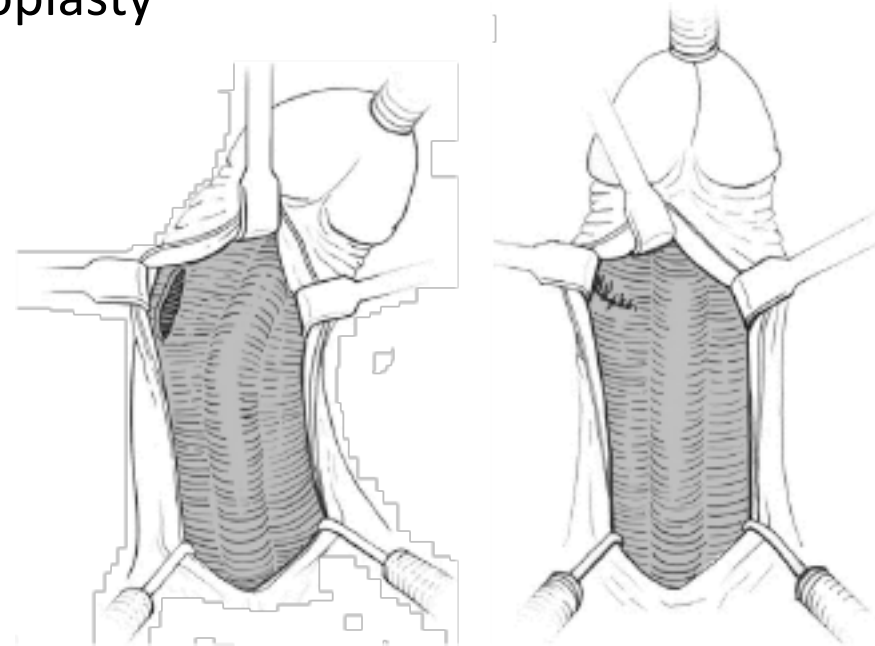
- No perceived length loss if using traction
- **Recommend because**
  - **Pts feel empowered**
  - **Downside is minimal**

Rybak et al (2012)



# PENILE PROSTHESIS FOR PEYRONIE'S + ED

- Evaluate erection before placing prosthesis (in office or intra-op)
- Techniques - curvature
  - Plication
  - Modeling
  - Scratch
  - Yachia (Heineke-Mikulicz) corporoplasty
- Techniques – narrowing
  - Scratch
  - Incision ± Graft
  - Narrow cylinders
    - Titan Narrow
    - AMS CXR



# PEYRONIE'S DISEASE - SUMMARY

- History & physical
  - Change in deformity
  - Pain
- Assess deformity with intracavernosal injection
- Active phase – management options limited (NSAIDs)
- Stable phase
  - Graft best for narrowing and good erectile function
  - Plication effective and minimally invasive
  - Xiaflex safe and effective
  - IPP for significant ED