Reconstructive Urology in Haiti
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Objectives
- Quality of life in Haiti
- Health care system in Haiti
- Etiology of Urethral Stricture
- Management of Urethral Stricture Disease
- The Role of Nurses in International Volunteer Work

Disclosures
- Nothing to Disclose
- No Financial Interest in Content
Haiti

- Population: 10 Million
- Life Expectancy: 63 years
- Poorest country in the Western Hemisphere
- 80% of people live below the poverty line
- 40% Unemployment Rate
Pignon, Haiti

- Northeast Haiti
- Pop: 29,000
- Agricultural Community
- Industries: Sugar Cane

ANATOMY

Spongiosum Distribution

Anterior Urethra (Spongiosum)
What is a Urethral Stenosis?

(Definition)

- Stenosis = Urethral Lumen narrowing noted on flexible cystoscopy or urethrography
- Scar of urethral epithelium with varying degrees of corpus spongiosal fibrosis
- Contracts in 2 directions (lumen size and length)

Preoperative Evaluation

1. Symptom survey (history)
   a. Voiding history
2. Retrograde urethrogram (RUG)
3. Voiding cystourethrogram (VCUG)
4. Urethroscopy
5. Uroflowmetry

Stricture Classification

- A
- B
- C
- D
- E
- F

Devine 1983

Long penile stricture

VCUG
Cystoscopy
Figure 2a. Effect of patient positioning on the appearance of the urethra during retrograde urethrography.

Complex proximal bulbar stricture
Contemporary Treatment Options

**MIS**
- Urethral Dilation
- Optical Internal Urethrotomy
- Endourethral Prosthesis

**Open Surgery**
- Excision and primary anastomosis (EPA)
- Free graft - genital
  - extragenital
- Penile skin island flap
- Combined Tissue transfer
- Staged repair
- Tissue Engineering
Urethrotomy is a Temporizing Measure in Contemporary Series


MIS Summary

- Dilation is as effective as Urethrotomy
- Long Term Outcomes are Poor
- Successive Urethrotomy is futile
- Limit to bulbar strictures < 2cm x 1

Urethrotomy success and stricture location

- Penile urethra 16%
- Bulbar urethra 42%

Pansadoro V. and Emiliozzi P, J Urol 1996; 156:73-75

General Technical Considerations

1. Tension-free anastomosis with adequate tissue mobilization
2. Watertight closure with small monofilament dissolvable suture
3. Nonoverlapping suture lines
4. Multiple layer closures whenever possible (to avoid fistula formation)
5. Adequate retraction
6. Sagittal incision or Inverted Y incision
Substitution Urethroplasty

- **Graft:**
  - Tissue transfer dependent on host bed for blood supply and nutrients.
  - No vascular pedicle.
  - Graft success = "% Take"

- **Flap:**
  - Tissue transfer with donor site blood supply intact.
  - Flap Success = "Survival"

TECHNICAL POINTS (Grafts)

- Dorsal Inlay (Asopa)
- Dorsal Onlay (Barbagli)
- Ventral Onlay

TECHNICAL POINTS (Basic Principles on Anterior Urethra)

- Anastomotic Urethroplasty (penile urethra):
  - Very short strictures (proximal).
  - Dorsal approach – trauma
Perineostomy

- Must be offer to all complex cases
- 78% satisfied with increase in QoL

*Barbagli G et al./J Urol 2008.*

### Cases

- Urethroplasty
  - PFUDD x2
  - Redo PFUDD
  - EPA x 2
  - Dorsal Onlay Augmented Root Strip Anastomotic
  - Ventral Onlay x2
  - Dorsal onlay and EPA
- General Urology
  - TURP x 4
  - Nephrolithotomy
  - Circumcision x 2
Postoperative Care

1. Pain control: wound infiltration with 0.5% bupivacaine (Marcaine) just before closure

2. Broad spectrum AB coverage (1 week) and 3 days after catheter removal

3. Ice packs (perineum and cheek) for 24 hrs

Nursing In International Volunteer Work

» Preoperative Evaluation
» Intraoperative Team
  » Time Out
  » Surgical checklist
» Post Operative Care
  » Discharge Instructions
» Partners In Educating International Clinicians
  » Nurses
  » Physicians

Thank You!

Questions?