

PD61-11

Initial Experience of Holmium Laser Enucleation of the Prostate Following Previous Prostatic Urethral Lift for Management of Benign Prostatic Hyperplasia

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Disclosures

- Authors have no disclosures

Background

- Prostatic urethral lift (PUL)
 - AUA guidelines
 - <80 grams prostate and verified absence of obstructive median lobe
 - Outpatient, same-day procedure
 - Minimal sexual dysfunction
 - Surgical retreatment rates of 13.6% over 5 years (~2-3% per year)¹

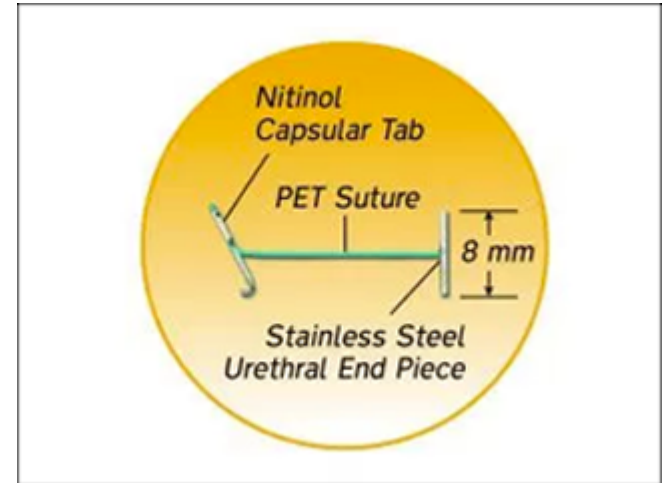
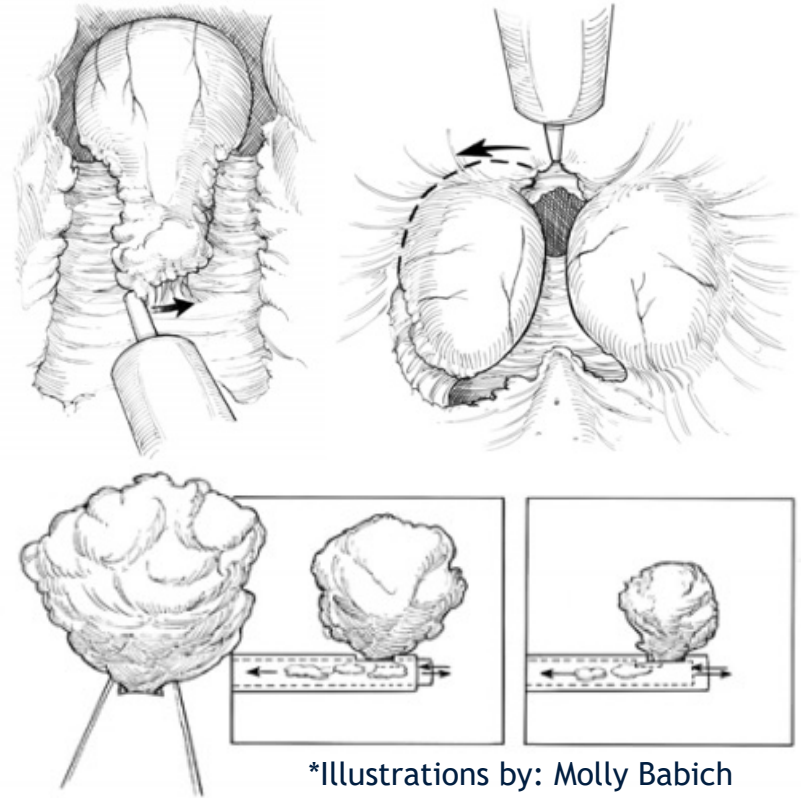


Image source: UroLift®

1. Roehrborn CG, Barkin J, Gange SN, et al. Five year results of the prospective randomized controlled prostatic urethral L.I.F.T. study. *Can J Urol*. 2017;24(3):8802-8813.

Background

- Holmium Laser Enucleation of the Prostate (HoLEP)
 - Size-independent
 - Endoscopic
 - Uses morcellator
 - Safe, technically feasible, and efficacious as secondary procedure²



*Illustrations by: Molly Babich

2. Elshal AM, Elmansy HM, Elhilali MM. Feasibility of holmium laser enucleation of the prostate (HoLEP) for recurrent/residual benign prostatic hyperplasia (BPH). *BJU Int.* 2012;110(11 Pt C):E845-E850.

*Bagley, Demetrius H. and Akhil Das. *Endourologic Use of the Holmium Laser*. Teton NewMedia, 2001.

Objective

- Determine the incidence of patients receiving HoLEP as secondary procedure following previous PUL
- Assess benefits and challenges of HoLEP in these patients at our institution

Methods

- Retrospective review from January 2013 to January 2020
- 721 consecutive HoLEP cases identified in 701 patients
- All cases performed by a single surgeon (AD)
- Data collected included:
 - Demographics
 - Time between previous PUL and HoLEP
 - Pre-operative prostate size
 - Pre- and post-operative PVRs
 - Intra-operative challenges/complications
- Statistical test: t-test

Results

- 2.1% (15/721) of HoLEP cases involved patients with previous PUL
- Age range 64-80 years (mean=70.5 years, median=71 years)
- Time between previous PUL and HoLEP ranged from 2.8-48 months (mean=18.3 months, median=16.1 months)
- Pre-operative prostate size ranged from 32-180 grams (mean=93.1 g, median=92.2 g)
- Pre- and post-operative PVRs:
 - Pre-op: mean=255.9, SD=263.0
 - Post-op: mean=37, SD=29.6
 - $p=0.0063$
- Symptom relief in all patients following HoLEP

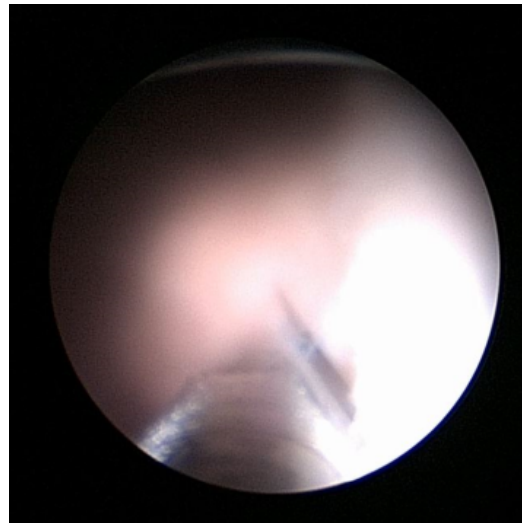
Results

- Intra-operative challenges/complications
 - 1 case
 - Large piece of calcified prostate tissue unable to be morcellated
 - Adenoma too large to remove using grasper or 10mm stone basket
 - Perc NCircle® nitinol tipless stone extractor (Cook Urological, Inc., Spencer, IN)
 - 1 case
 - Metallic tine of PUL prevented proper morcellation
 - Remaining calcified adenoma with tine too large (3-4cm) to remove per urethra
 - Long case time
 - Patient discharged home and returned in 7 days to retrieve remaining chip
 - Bipolar loop resection into smaller pieces
 - 1 case
 - Adherent bladder stone with submucosal tine in posterior bladder wall
 - Tine pulled and removed with graspers prior to initiating enucleation
 - Remaining 12 cases required morcellator instrument removal or the use of graspers

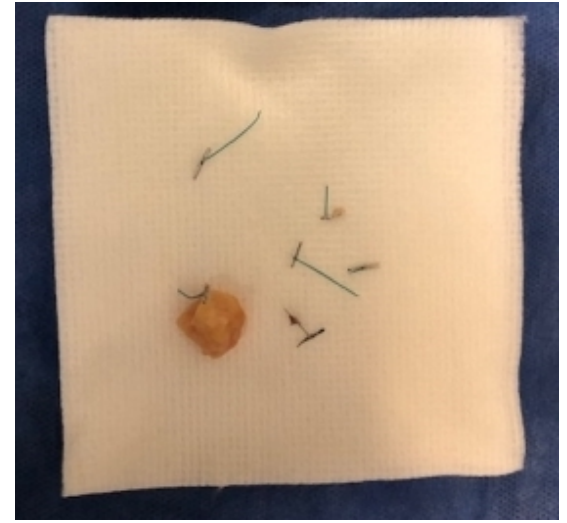
Images



UroLift cut during enucleation



UroLift tine caught in morcellator



Gross specimen of prostate tissue with UroLift tines and sutures

Conclusion

- HoLEP is safe and effective in PUL failure populations
 - Not without unique challenges:
 - Distorted prostate anatomy by PUL
 - Unintended location of PUL implants³
 - Jamming of morcellator
- Auxiliary maneuvers and techniques required to deal with tines
 - Graspers
 - Catch and release⁴
- Thorough discussion with patients considering PUL about management options

3. McAdams S, Funk JT, Navetta AF, El Tayeb MM, Humphreys MR. Holmium Laser Enucleation of the Prostate After Prostatic Urethral Lift Surgery: Feasibility and Technical Considerations from a Multi-Institutional Case Series. *J Endourol.* 2017;31(8):774-779.

4. Parikh KA, Dora CD. Holmium Laser Enucleation of the Prostate After Failed UroLift: Surgical Considerations for the Management of Nonabsorbable Implants. *Urology.* 2019;132:212.

Thank You!

Questions or Comments?

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