

Advances in Urology – Innovative Treatment for Benign Prostatic Hyperplasia (BPH)

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Short Introduction:

- Consultant Urologist for the past 20 years.
- Worked in the Netherlands until August 2020
- For the last 1,5 years in Beacon Hospital in Ireland

Specialised:

- Benign Prostatic Enlargement
- Stone treatment

Overview of Presentation

- Introduction of LUTS and BPH
- History of surgical treatment of BPH
- Recent Advances and Innovations
- Newest Surgical Option

Introduction

Lower Urinary Tract Symptoms (LUTS)
&
Benign Prostatic Hyperplasia (BPH)

LUTS Due to a Myriad of Reasons



LUTS Due to BPH



Voiding symptoms (obstructive):

- Hesitancy
- Weak stream
- Post micturition dribble
- Straining
- Incomplete emptying
- Ultimately urinary retention.

Storage symptoms (irritative):

- Urgency
- Urge incontinence
- Frequency
- Nocturia
- Dysuria
- Suprapubic discomfort

Typical BPH patient presents with: nocturia and slower urinary stream, difficulty starting and stopping urinary flow and / or with sensation of incomplete voiding

Lower Urinary Tract Symptoms (LUTS) Due to Benign Prostatic Hyperplasia (BPH)

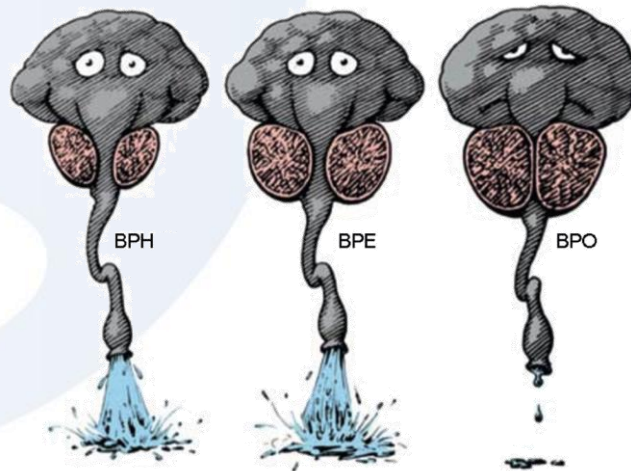
- BPH very common problem for men
 - 40% of men in their 50's
 - 70% in their 60's
 - > 85% in their 80's
- Prevalence of LUTS in GP practice:
 - 10% men older than 45y
 - to 25% of men age 80y
- Men under the age of 50 presenting with LUTS are unlikely to have BPH



Lower Urinary Tract Symptoms (LUTS): Due to Benign Prostatic Enlargement (BPE)

What is Benign Prostatic Enlargement?

- Due to hormonal changes in the aging male: increase of prostate size with growth of the transitional zone : Benign Prostatic Enlargement (BPE)
- Pressure of this benign prostate growth on the urethra causing bladder outlet obstruction -> benign prostatic obstruction (BPO)



TransUrethral Resection of the Prostate

TURP

Still the Gold Standard?

Transurethral Resection of the Prostate

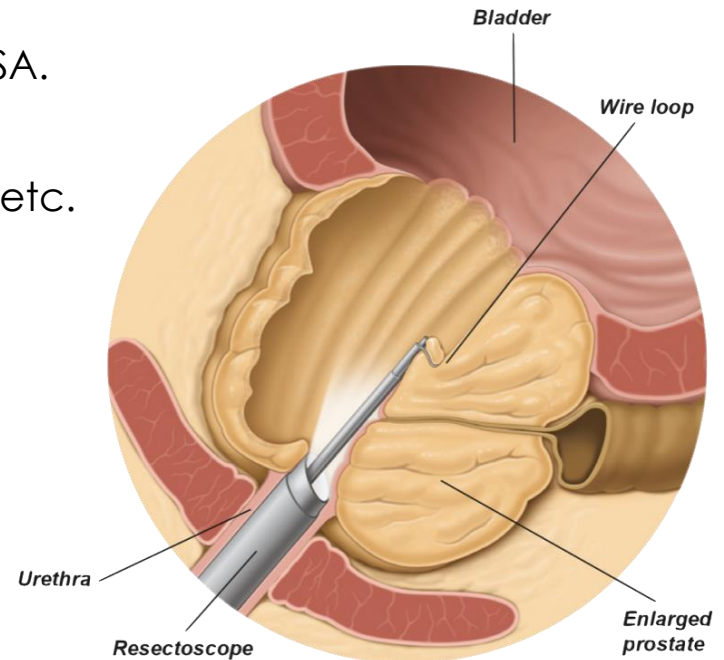
The first resectoscope and hence the first TURP was introduced by Maximilian Stern in 1926 in the USA.

Technical advancement in optics, electric currents etc. have made TURP a safe procedure since the 70's

Has been considered the “Gold Standard”

However, still **side effects**:

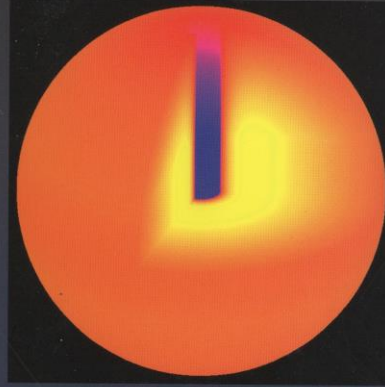
1. Bleeding pre – and postoperatively in 10%
2. 2 - 4 days hospital admission
3. Retreatment in 5 years up to 14%



Innovations and Recent Advances

TransUrethral Microwave Thermotherapy

*an evolving technology in the treatment
of benign prostatic enlargement*



Michel J.A.M. de Wildt

Historical Overview of Alternatives for BPH Treatments

Reduce prostatic obstruction by:

- **Mechanical:**
 - Stents (> 90's)
 - Urolift (2013)
- **Non Surgical** Procedural Alternatives with tissue destruction by heating
 - TUMT (1996) : microwave
 - Laser (> 90's): laser
 - Rezūm (2017): steam
- **Surgical Resection** of Prostate tissue:
 - Open Resection (Millin 1930's)
 - TURP (> 1970's): electrical current to cut
 - HoLep (1998): laser energy and mechanical removal of prostate tissue

Recent Advances in Urology – Treatment of BPH in Ireland

Alternatives to TURP:

- Urolift (2017)
- Rezum (2019)
- HoLEP (2020)



Urolift System – Mechanical Desobstruction

What is Urolift

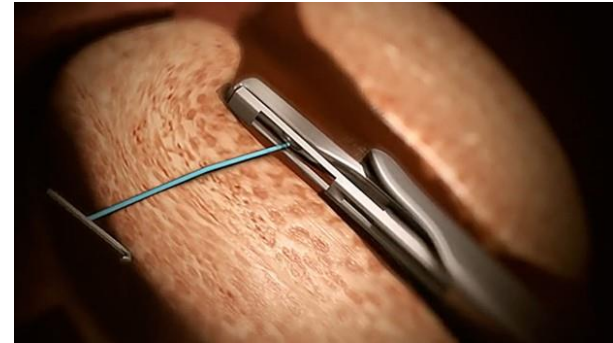
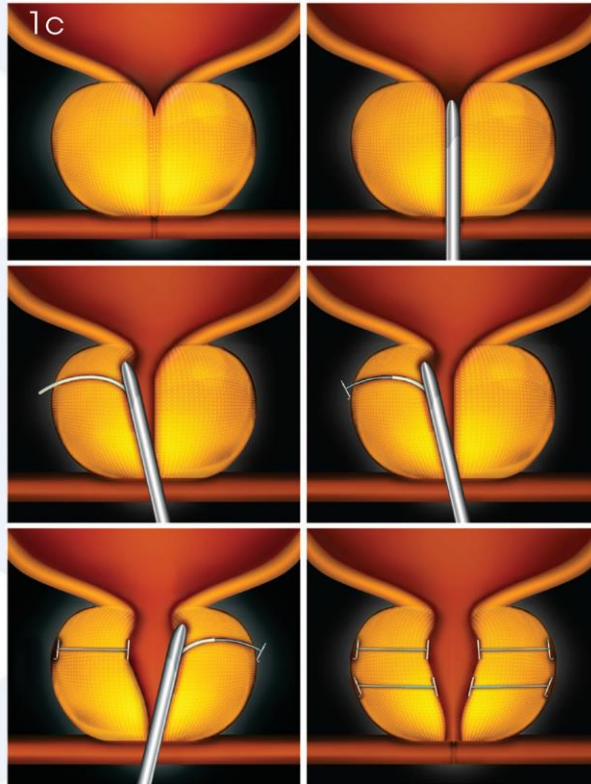
- Early treatment option for BPH
- Does not require heating, cutting, removal, or destruction of prostate tissue
- Urolift Implants are permanently placed to lift and hold the enlarged prostate tissue out of the way and increase the opening of the urethra
- Delivers rapid symptom relief and recovery

Indications

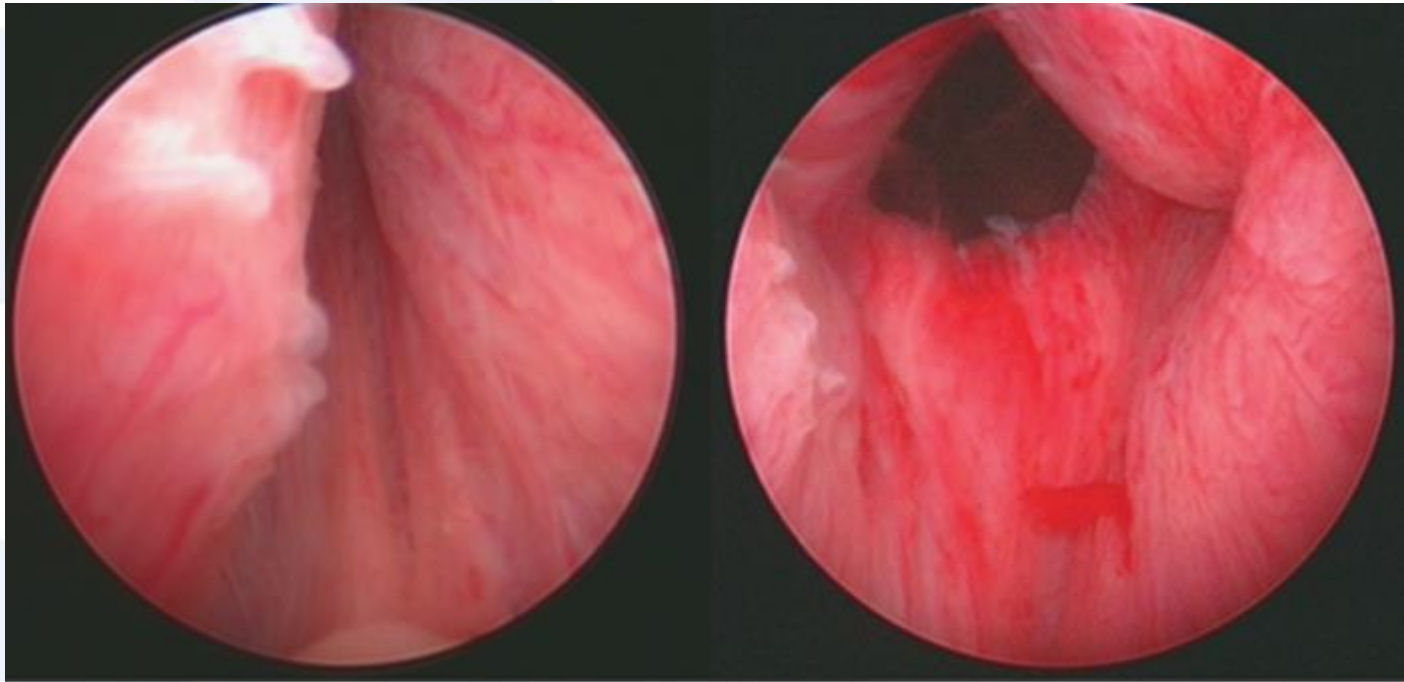
- Younger patients who do not want surgery
- Prostate size < 50 ml
- Minimally invasive alternative to medical treatment
- When man wants to avoid retrograde ejaculation



Urolift Visualisation



Urolift Real Life Images



Rezūm – Non Surgical Procedural Desobstruction

Also known as: **Water Vapor Therapy**

- Injecting a small amount of water vapor (steam) into the prostate
- Prostate healing response absorbs the treated tissue and shrinks the prostate opening up the urethra so reducing obstruction and BPH symptoms

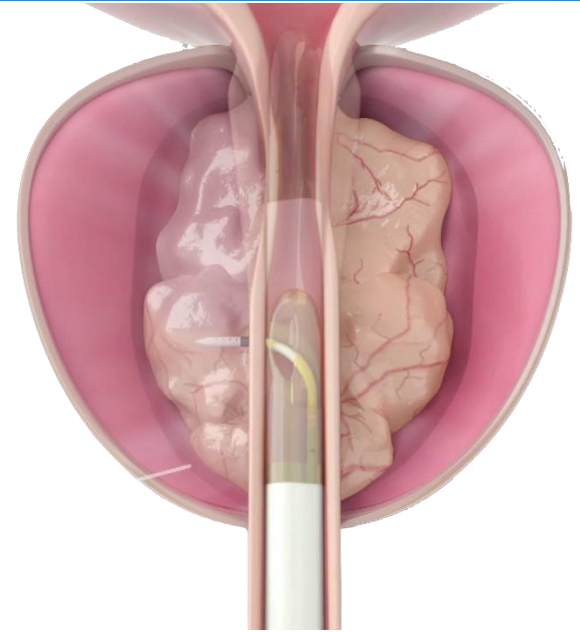
Indication

- Enlarged prostates, up to 90ml
- When man wants to avoid retrograde ejaculation

Effect

- It takes time to heal after steam treatment
- 2 weeks to 3 months for men to experience full improvement

Principles of Rezūm



Newest Surgical option for BPH

HoLEP

The new *Gold Standard?*

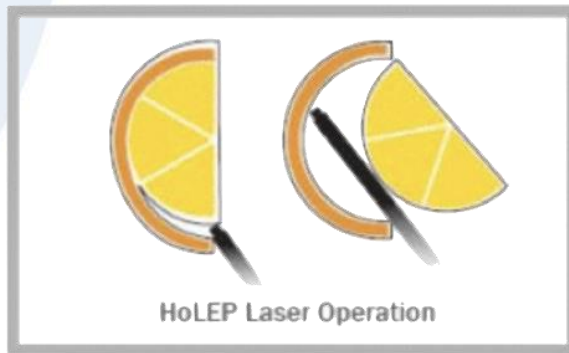
HoLEP – Surgical Removal of prostate obstruction

- **Holmium Laser Enucleation of the Prostate**
 - Anatomical Complete Removal of the obstructive Prostatic Tissue
 - Additional Morcellation of removed tissue
- HoLEP is **superior** to TURP:
 - Less bleeding during AND after surgery
 - Catheter removal in almost all cases, the day after surgery
 - Hardly any haematuria or clot retention in 4-6 weeks post HoLEP
 - Long term effect: no retreatment for recurrent prostate growth
 - Higher flow rates and less residual urine after treatment
 - Independent of prostate size
- EAU (European Association of Urology) **Guidelines:**
 - perform HoLEP when available
 - Superior to TURP: proven in randomised comparative studies

HoLEP Versus TURP in Diagram

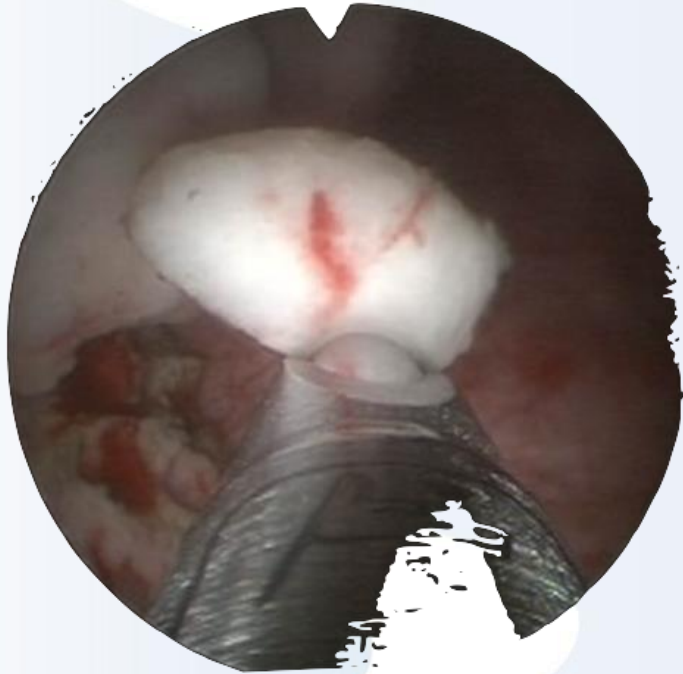


Traditional transurethral prostatic resection



HoLEP Laser Operation

Morcellation





Take Home Messages

Alternative treatments for BPH *are* available

Post operative side effects of bleeding or clot retention are minimal

Individualised treatment catered to patient's wishes are now possible

Take Home Messages

Ideal Patient for **Urolift**:

- Younger, sexually active man
- Moderate LUTS and a smaller prostate



Ideal Patient for **Rezum**

- Ageing male with moderate to severe LUTS
- Wants to avoid surgery
- Medium sized prostates up to 90 ml

Take Home Messages

Ideal Patient for **HoLEP**

- Ageing male with moderate to severe LUTS
- Larger prostates 45 ml or more up to 200 ml
- Severe bladder outlet obstruction
- Or in urinary retention
- In need of a definitive solution



My personal experience (after treating more than 350 patients in the past 6 years), HoLEP is definitely superior to TURP both **objective** AND **subjective** parameters

Finally in Ireland, for a lot of men with BPH there is light at the end of the tunnel...

Let the Laser Light be with you and your patients



For referrals or to Discuss a Patient
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