

V06-09**SIAMLEP: ANATOMICAL SIMULATOR FOR PROSTATE ENUCLEATION AND MORCELLATION WITHIN A SINGLE TRAINING DEVICE**

Sergio Fernandez-Pello, Luis Rodriguez Villamil, Gijon, Spain; Iñigo Hidalgo, Elena Cienfuegos, Ignacio Rodriguez, Oviedo, Spain; Begoña Diaz Mendez, Gijon, Spain

INTRODUCTION AND OBJECTIVES: Benign Prostatic Hyperplasia (BPH) is the most common prostate disease in the male population. To treat this disease, there is a surgical technique called Holmium Laser Enucleation of the Prostate (HoLEP), highly recommended by the main clinical guidelines. But not frequently and widely performed in the urological world because of its difficulty in the first steps of the learning curve. Any error during surgery can lead to bladder perforations or sphincter injuries that can lead to temporary or permanent urinary incontinence. There is no single mechanical simulation device to practice both of the HoLEP key steps (enucleation and morcellation of prostate). There isn't an accredited training path for learning HoLEP, contrary to other complex techniques as laparoscopy or robotics. We designed, developed and present a model to improve the learning curve of both steps of HoLEP, a complex but necessary technique for treating BPH.

METHODS: We designed an anatomical and high definition prototype composed by an internal inanimate part simulating the anatomy of the lower urinary tract (bladder, prostate and urethra) held in an inanimate anatomic pelvic cavity. All with high fidelity dimensions based on the patients' CT-scans. The materials selected are based on platinum silicon of low harshness. The prostate part is composed by three layers of different textures: one external simulating the prostate capsule, one internal simulating the adenoma and one hairy interphase to simulate the anatomical plane between the capsule and the adenoma. The model is protected in Europe (U202431418 and 202025104262).

RESULTS: The device permitted the training of the two critical steps of HoLEP with the same inanimate and anatomical device. The surgical tests with this model showed that the main steps are reproducible. This technology allows the users to train the correct positioning of working instruments and the hands positioning. Also reproduces the tactile response and resistance of the human tissue.

CONCLUSIONS: Single HoLEP simulator that reproduces the main two critical steps of the procedure in the same device. Potential reduction of the incidence of complications and learning curve derived from HoLEP surgery for BPH in the male population. This model would allow a scheduled and accredited HoLEP programme based on: theory exams, simulation in inanimate models and supervision of the first cases to guarantee the success of the implementation process.

Source of Funding: ISPA public and national grant (Spain)

V06-10**ALTERNATIVE FOR PROSTATIC MORCELLATION DURING MILEP 18.5FR IN A PATIENT WITH URETHRAL STRICTURE**

Lucas Bergadá, Camila Pedernana, Guillermo Montelli, Diego Santillán, Federico Ignacio Tirapegui, Christian Cristallo, Mariano Sebastián González, Buenos Aires, Argentina

INTRODUCTION AND OBJECTIVES: Holmium laser enucleation of the prostate (HoLEP) is an effective technique for the surgical treatment of benign prostatic hyperplasia. In recent years, minimally invasive laser enucleation of the prostate (MiLEP) has been developed thanks to the introduction of smaller-caliber instruments (Slim 22Fr and Ultra Slim 18.5Fr). This technique has proven to be both safe and effective.

In patients with subclinical urethral stricture, transurethral access may require smaller-caliber instruments, such as the 18.5 Fr mini resectoscope, which limits the use of conventional morcellation scopes for adenoma extraction. The availability of low-caliber scopes has enabled this procedure to be performed in patients who previously

would not have been candidates, presenting new technical challenges for prostatic morcellation. The objective of this study is to describe a surgical alternative for prostatic adenoma morcellation in a patient with urethral stricture who underwent MiLEP 18.5 Fr at the Hospital Italiano de Buenos Aires in February 2025.

METHODS: A clinical case is reported. The patient presented with lower urinary tract symptoms (IPSS 24), prostatic enlargement on ultrasound (40cc), and subclinical urethral stricture (urethral caliber >16Fr) at the bulbar urethra confirmed by cystoscopy.

The procedure was performed with a holmium laser fiber, using an 18.5 Fr mini resectoscope. Enucleation was achieved with laser settings of 1.5 J and 30 Hz (45 W). Morcellation was carried out transvesically through a 5 mm trocar placed via a suprapubic approach. Rigorous hemostasis with holmium laser was performed, as the reduced instrument caliber precluded the use of bipolar energy.

RESULTS: The procedure was completed within standard operating time with a total surgical duration of 80 minutes. No intra-operative complications or bladder injuries related to morcellation were observed. Postoperative recovery was uneventful. The patient was discharged within the first 24 hours after surgery. Total indwelling catheter time was 48 hours. Postoperative uroflowmetry at 6 months had a Qmax of 25 ml/s (previously 8 ml/s). No surgical or clinical complications were recorded during the first six months of follow-up. Satisfactory voiding outcomes were achieved at six months, confirmed by uroflowmetry.

CONCLUSIONS: Suprapubic transvesical morcellation through a 5 mm trocar may represent a feasible and safe technical alternative for patients with urethral stricture undergoing HoLEP with low-caliber resectoscopes.

Source of Funding: This study did not receive any external funding

V06-11**EMPOWERING PATIENTS TO REDUCE UNPLANNED HEALTHCARE ENCOUNTERS AFTER BPH SURGERIES**

Mary E. Crumbley, Michael Uy, John DiBianco, Ann Arbor, MI; Sabry Mansour, Lapeer, MI; Stephanie Daignault-Newton, Naji Ayyash, Mahin Mirza, Mark Bradshaw, Kushbu N. Singh, Kurshid Ghani, Casey Dauw, Wilson Sui, Ann Arbor, MI

INTRODUCTION AND OBJECTIVES: Over 600,000 men over the age of 65 years are diagnosed with benign prostatic hypertrophy (BPH) each year, contributing to a growing cohort of men undergoing BPH procedures. Although a wide range of procedural options now exist—each with distinct technologies and outcomes—postoperative emergency department (ED) visits remain common across all treatment types. The objective of this study was to characterize and to identify predictors of ED visits following BPH procedures to inform the development of patient-centered solutions to reduce postoperative ED utilization.

METHODS: We used Michigan statewide claims data to identify patients who underwent surgical therapy for benign prostatic hyperplasia between 2015 and 2023. Procedures included water vapor thermal therapy (WVTT), transurethral resection of the prostate (TURP), prostatic urethral lift (PUL), laser photovaporization (PVP), simple prostatectomy (SP), robotic waterjet therapy (RWJT), and laser enucleation of the prostate (LEP). ED visits within 30 days of the index procedure were evaluated and classified according to the primary ICD-9/10 diagnosis code. Multivariable logistic regression was performed to identify factors associated with 30-day ED visits. Working with our patient advocates, we then created initial patient-facing documents aimed to mitigate common reasons for ED visits.

RESULTS: In total, 55,693 procedures were identified with ED post-op visits ranging from 10 to 17% by procedure. BPH post-op ED visits were associated with several patient comorbidities, including heart disease, obesity, and diabetes. The most common reasons for ED visits were catheter complications, UTI, hematuria, and urinary retention. On multivariable analysis, two key clinical predictors included catheter dependence before surgery and anticoagulation

use. We observed that many ED visits appeared to be connected to foley catheter-related complications and as such embarked to create multimedia patient-centered education resources in collaboration with patient advocate volunteers. Materials included basic catheter care and catheter flushing short-form video content.

CONCLUSIONS: BPH procedures have a high rate of post-op ED visits. Understanding which patients are most likely to present to the ED and their chief concerns helps guide counseling and the creation of patient-centered resources with the goal of reducing BPH post-op ED visits.

Source of Funding: None

V06-12

HOLMIUM LASER ENUCLEATION OF THE PROSTATE: ANATOMICAL FOUNDATIONS, TECHNICAL DESCRIPTION OF THE NO STRESS INCONTINENCE ENUCLEATION (NICE) TECHNIQUE, AND PILOT STUDY RESULTS IN 38 PATIENTS

Ahmad Abdelaziz, Aravindh Rathinam, Jonathan Elliott Katz, Robert Marcovich, Miami, FL; Thomas R. W. Herrmann, Frauenfeld, Swaziland; Hemendra N. Shah, Miami, FL

INTRODUCTION AND OBJECTIVES: Holmium laser enucleation of the prostate (HoLEP) is a size-independent treatment for benign prostatic hyperplasia; however, its steep learning curve and the relatively high rate of transient urinary incontinence have limited its broader adoption. Various technical modifications have been proposed to minimize postoperative incontinence. After revisiting the detailed anatomy of the urethral sphincter, we present a novel approach, No Stress Incontinence Enucleation (NICE), designed to preserve both the striated and smooth sphincteric components between the 10 and 2 o'clock positions. This video demonstrates the anatomical rationale and step-by-step technique of NICE, based on our initial experience with 38 patients

METHODS: We retrospectively reviewed data from all patients who underwent HoLEP with the NICE technique at our institution between May and October 2025. Baseline data, including IPSS, maximum urinary flow (Qmax) and post-void residual urine (PVR), prostate size, and PSA, were collected. The procedure was performed using the Moses 2.0 holmium laser (2J, 30 Hz). Follow-up at 6 and 12 weeks assessed IPSS, Qmax, PVR, and complications. This video showcases the procedural steps of the NICE technique using a representative patient's recording.

RESULTS: A total of 38 patients, aged 67.7 ± 4.18 years, with a median prostate volume of 120 (65, 173) cc, underwent HoLEP using the NICE technique at our institution. Preoperative median IPSS, Qmax, and PVR were 15 (11, 24), 7.8 (5.1, 10.2) ml/sec, and 86 (23, 228) cc, respectively. The average operating time was 253 (180, 297) minutes, with a median catheter duration of 1 day. All patients, except one with a preoperative bladder capacity > 2 liters, had successful voiding trials on the first postoperative day. The exception voided spontaneously after 3 additional weeks of catheterization. There were no intraoperative or postoperative complications during the 3-month follow-up. Transient stress incontinence occurred in 3 patients in whom we could not completely preserve the anterior fibromuscular stroma. A total of 35 patients were continent after catheter removal. All three cases of stress incontinence resolved within 6 weeks, requiring no additional intervention.

CONCLUSIONS: In our initial 38 patients, the NICE modification preserved continence without negatively impacting the short-term outcome of HoLEP.

Source of Funding: N/A