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Five-years outcomes following holmium laser enucleation of the prostate in 180 consecutive patients in a single center serie evaluation of peritumoral pseudocapsule characteristics: preliminary results

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Aim of the study: We assessed 5-years follow-up of functional outcomes after holmium laser enucleation of the prostate (HoLEP) for Benign Prostatic Hyperplasia (BPH) in a single center serie.

Materials and methods: We conducted a retrospective study of 180 evaluable patients treated with HoLEP between March 2008 and October 2013 performed by a single surgeon at the Department of Urology of the hospital of PRATO. We collected preoperative and postoperative data after 5 years of follow-up. Study variables included International Prostate Symptom Score (IPSS), Maximum urinary flow rate (Q_{max}), post-void residual urine volume (PVR), Prostate Volume and prostate specific antigen (PSA) of our population were reported. Long-term complications included re-operation rate due to regrown adenoma were also reported.

Results: Mean follow-up was 60 months. Mean $\pm$ SD preoperative IPSS score, Q_{max} and PVR were 22.05 ± 4.57 , 6.5 ± 2.72 ml/s and 106.3 ± 71.8 cc, respectively. Mean $\pm$ SD prostate volume measured with Transrectal ultrasound was 112.7 ml ± 52.62 . 5-years post operatively variables showed significant functional improvements with 4.45 ± 2.25 , 33 ml/s ± 7.87 and 11.6 ± 4.78 cc of IPSS, Q_{max} and PVR, respectively. The Patient Global Impression of Improvement was very much better for 70% (126/180) of patients. No patients were re-submitted to surgery in this period. PSA rate dramatically decreased from 13 ng/dl ± 7.96 to 1 ng/ml ± 0 . We reported no bladder-neck or urethral strictures in our serie.

Discussion: Holmium laser enucleation of the prostate represents an effective and long-term modality for men with symptomatic BPH. All studied patients maintain functional improvement at later followup with no long-term complication or reoperation rate.

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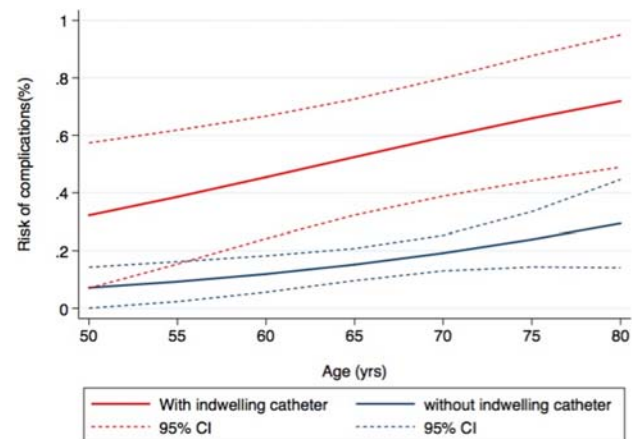
Postoperative complications after holmium laser enucleation of the prostate in a high volume center with more than 15 years of experience

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Aim of the study: Holmium laser enucleation of the prostate (HoLEP) is considered a challenging procedure with a steep learning curve limiting its widespread adoption. We investigated rates and predictors of postoperative complications in a high volume center.

Materials and methods: Data from 294 consecutive patients treated with HoLEP in 2015–2017 at a single high volume center with >15 years of experience were analysed. All patients were treated with the 100 W Ho:YAG laser device. Postoperative complications were reported following EAU guidelines recommendations on surgical complications: data were prospectively collected by phone interviews conducted by physicians up to 12 months after HoLEP. Procedure-specific complications were defined [bladder perforation; bladder neck contracture (BNC); blood clot retention; transfusion; re-surgery for hematuria; urinary retention]. Complications were graded using the Clavien-Dindo (CD) system. Ten (3.3%) patients were lost to follow-up. Logistic regression analysis tested preoperative risk factors for postoperative complications.

Results: Baseline median (IQR) age was 67 (62,71); IPSS score and prostate volume of 19.5 (13,25) and 87 (60,120) cc, respectively. Of 284, 51 (18%) had indwelling urinary catheter. Median (IQR) operating time was 58 (40,84) minutes. Patients were discharged 2 (1, 3) days after HoLEP. Complications during hospitalization was 19%, while complications after discharge were 4.6%, with a 22% overall rate (≤ 12 months from surgery). Complications were graded as CD 1 [8.1% (23)], 2 [12% (35)] and 3a [1.8% (5)]. Rates of procedure-specific complications were: blood clot retention: 0.7%; blood transfusion 2.1%; re-do surgery 1.4%; bladder perforation 0%; BNC 0.7%; urinary retention 8.8%. At logistic regression analysis, older age (OR: 1.06; 95%CI: 1.01–1.11; $p = 0.04$) and having an indwelling catheter (OR: 6.1; 95%CI 2.47–15.3; $p < 0.0001$) emerged as significant risk factors for post-HoLEP complications, after accounting for CCI, anticoagulant/antiplatelet therapy, prostate volume and IPSS. Patients 70-yr old with an indwelling catheter had a 60% probability of complications compared to 20% for same-age patients without catheter (Figure 1).



Discussion: HoLEP is a safe procedure in experienced hands with less than 2% high-grade complications. Older patients with indwelling catheter deserve to be carefully managed due to a higher risk of postoperative complications.

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Is holmium laser enucleation of the prostate (HoLEP) safe and effective in patients with a high comorbidity burden? Insights from two referral academic Centres

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Aim of the study: Patients with significant comorbidity burden have limited options for the treatment of benign prostatic hyperplasia (BPH). Nevertheless, surgery is often required, especially after multiple episodes of acute urinary retention. In this study, we assessed the safety as well as the perioperative and functional outcomes of HoLEP in patients with a high comorbidity burden.

Materials and methods: Data from patients undergoing HoLEP at two Italian academic referral Centres from March 2017 to January 2019 were prospectively collected. All procedures were performed by three experienced endoscopic surgeons. Charlson Comorbidity Index (CCI) score was used as measure of comorbidity. Patients were divided into two groups according to CCI (<3 and ≥ 3). Preoperative characteristics, functional questionnaires [IPSS, IIEF-5, OAB-q, ICIQ-sf, stress urinary incontinence (SUI), QoL], perioperative data, as well as 3 months follow-up data were collected. Study endpoints included operative