
COMMENTARY

Holmium laser: not just the tool for BPH enucleation

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Thurmond et al present on their single surgeon, single VA hospital institution experience with a retrospective review of all men undergoing holmium laser prostate surgery for bladder outlet obstruction (BOO) over a 6 year period. In summary, 169 men were identified with 115 (68%) undergoing HOLEP and only 54 undergoing pure tissue ablation (HOLAP). With a mean follow up of 2-3 years, the authors conclude that present outcomes were comparable between the two approaches.¹

Unfortunately, there was no randomization process to compare the two very different techniques of holmium laser assisted blunt adenoma enucleation followed by morcellation (HOLEP) to holmium tissue vaporization (HOLAP). Principles for patient selection were based dominantly on the senior authors subjective visual intraoperative features with cystoscopy for selecting HOLAP. These included a short prostatic length, absence of a median lobe and no intravesical protrusion. Due to inherent difficulties at a Veterans Administration (VA) system, the authors lacked the consistent use of TRUS imaging to accurately measure prostate volume. Only 1/3 of the studied men had preoperative TRUS imaging thus making the distinction of cut off volumes difficult to appreciate. Nevertheless, as expected, TRUS volumes

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were much larger for men undergoing HOLEP (81cc versus 49 cc; $p = 0.001$). Interestingly, in comparing the reported DRE sizing in the same population between HOLEP and HOLAP, we can appreciate the significant underestimation for larger prostates (46 cc versus 38 cc). In most reported HOLAP series, prostate volumes < 60 cc are most often noted related to favorable outcomes.²⁻⁴

Moreover, the absence of both preoperative and postoperative IPSS questionnaires, coupled with the lack of earlier functional outcomes (uroflowmetry data, post-void residual volumes) at 1, 3 and 6 months makes interpretation and comparison between modalities (and other reported publications) difficult. Nevertheless, the authors do present data at 1 year following surgery including Clavien classification of all reported complications. Interestingly, when comparing PSA reductions after HOLAP and HOLEP (which has been demonstrated to be a relatively accurate correlate to prostate volume change), the PSA reduction was 45% and 56%, respectively. Compared to other large HOLEP series, with PSA reductions beyond 70% at 6-12 months, the current series 6% BPH retreatment may be related to undertreated transitional zone adenoma.⁵ Unfortunately, data on the subset of men who required repeat surgery were not evaluated. Other publications have noted that a reduction of PSA < 50% at 6 months following BPH surgery was correlated to great risk of BPH recurrence.^{6,7}

While limited by methodological restraints in a VA system, this paper is meaningful in demonstrating the versatility of the holmium laser system, both as an instrument to dissect along the surgical capsule as well as a tool for vaporization. Patient selection and surgical expertise and experience are crucial for ensuring optimal outcomes. In lack of firm criteria for properly selecting men for HOLAP, we continue to optimize preoperative prostate imaging with ultrasonography for accurate volume determination⁸ to help with patient counseling of the various BPH techniques and modalities.⁹ Its knowledge also helps with planning of operative time and length of anesthesia. Moreover, in the era of safety and surgical durability, the risk of postoperative complications are also prostate volume dependent¹⁰ and should be disclosed adequately to the patient. As reflected in the current paper, similar to our own personal experiences and that of previous reports,^{11,12} use of DRE to assess prostate volume in large prostates is invariably inaccurate. □

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