

Let's not forget about TUIP: A highly underutilized, minimally-invasive and durable technique for men with <30 g prostates

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Cite as: *Can Urol Assoc J* 2015;9(7-8):255-6. <http://dx.doi.org/10.5489/cuaj.3239>
Published online August 10, 2015.

Since its initial description in 1969 by Orandi,¹ transurethral incision of the prostate (TUIP) alleviates lower urinary tract symptoms (LUTS) secondary to bladder outlet obstruction (BOO) by splitting open the bladder outlet without tissue removal. This technique is considered the surgical therapy of choice for men with small prostates <30 cc and without middle lobes, as supported by the benign prostatic hyperplasia (BPH) guidelines of the European Association of Urology,² American Urological Association,³ and the Canadian Urological Association.⁴

Benefits of TUIP include a low risk of perioperative morbidity, low incidence of retrograde ejaculation, shortened operative time, reduced postoperative bleeding – all coupled with the benefits of demonstrated short-term outcomes similar to transurethral resection of the prostate (TURP) for well-selected patients. A meta-analysis of short- and long-term data from 10 randomized controlled trials comparing TUIP with TURP found similar LUTS improvements and lower, but not significant, improvements in maximum flow rates for TUIP patients with small prostates, without enlarged prostate median lobes.⁵ There is also published data to support significantly **lower bladder neck contracture rate** for men undergoing TUIP when compared to TURP.⁶

Despite these merits, TUIP remains underutilized in the urological community, possibly because of the concerns of the prostate size limitations, lack of transrectal ultrasonography to evaluate prostate volume prior to BOO surgery, reimbursement factors favouring TURP, and the question of long-term durability of success. Holmium TUIP (Ho-TUIP) has been previously described and used safely and effectively for small prostates even in high-risk anticoagulated patients.^{7,8}

In the current retrospective study of 80 patients, Elkoushy and colleagues demonstrate a durability of benefits with

long-term 5-year follow-up in prostate volumes <30 cc.⁹ Interestingly, re-operated patients (11%) after Ho-TUIP had significantly larger prostate volume (36.8 ± 8.9 vs. 27.6 ± 5.1 cc, $p < 0.001$). Furthermore, the authors showed in a multivariate regression model that only prostate size independently predicted re-operation (adjusted odds ratio 95% confidence interval 7.12 [2.92–9.14], $p = 0.01$). Moreover, in a randomized study comparing TUIP and TURP in prostates <30 cc, the re-treatment rate was 7.5 % for both TURP and TUIP with slightly better IPSS and maximum flow rate, in favour of the TURP group. However, TUIP had a significantly lower rate of retrograde ejaculation (22.5%) and erectile dysfunction (7.5%) compared to TURP (52.5% and 20%, respectively).¹⁰ Despite its retrospective nature, this study is noteworthy as it confirms the beneficial use of Ho-TUIP for selected patients with small prostates. The authors should be congratulated for this clever study and acknowledged for reminding us of this overlooked technique, which is also attractive, by its cost-effectiveness due to its shorter hospitalization stay and the use of reusable Holmium laser fibres. Finally their findings also highlight the importance of using preoperative imaging, notably TRUS, to accurately assess prostate size before planning BPH surgery to select the most appropriate procedure.¹¹

In concluding this editorial comment, we, the urological community, should ask the basic question: do men with small <30 cc volume prostates biologically have BPH? Or does their BOO stem from high, tight bladder necks? Not all prostates fit into the same “BPH bucket.”

Competing interests: Dr. Hueber declares no competing financial or personal interests. Dr. Zorn is a consultant for American Medical Systems.

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