

### ***Re: Tutrone RF, Schiff W. Early patient experience following treatment with the UroLift prostatic urethral lift and Rezūm steam injection. Can J Urol 2020;27(3):10213-10219.***

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AREZKI A, SADRI I, ZAKARIA AS, NGHUYEN D-D, BHOJANI N, ELTERMAN D, CHUGHTAI B, ZORN KC. Re: Tutrone RF, Schiff W. Early patient experience following treatment with the UroLift prostatic urethral lift and Rezūm steam injection. Can J Urol 2020;27(3):10213-10219. *Can J Urol* 2021;28(1):10506-10507.

In a recent publication, Tutrone et al described and compared 1-month postoperative patient experiences and clinical outcomes following treatment for benign prostatic hyperplasia (BPH) between two minimally invasive procedures: UroLift prostatic urethral lift (PUL) and Rezūm.<sup>1</sup> The short-term outcomes of these two ambulatory procedures are undoubtedly important, notably for patient

counselling and peri-procedural preparation and expectations. Rezūm is an emerging therapeutic, using convective radiofrequency water vapor thermal therapy to gradually cause localized cell necrosis in the prostatic tissue over a 3-month process. Early studies have shown promising clinical outcomes with low complication rates, good preservation of sexual function for prostate sizes of 30 cc-80 cc, and strong 5 year durability (4% BPH surgical retreatment rate).<sup>2</sup> Moreover, PUL is another novel procedure involving delivery of several implants through the urethra, thus physically retracting obstructing prostate lobes. Through mechanical action, these implants allow for more immediate relief of symptoms with few side-effects.<sup>3</sup> In this study, the authors conclude significantly better 1-month functional outcomes and faster recovery for UroLift when compared to Rezūm. While meaningful, we believe that this study must be interpreted by the readership with great caution due its limitations.

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With very short follow up of 30 days post-MIST, the study cannot account for the inherently delayed response with water vapor convection and cannot reflect on any meaningful durability in the outcomes of the procedure. In the largest trial from McVary et al, maximum changes from baseline in Rezūm therapy are observed only at 3 months. This relates to the resolution in the immediate inflammatory response post-procedure, secondary to steam ablating the tissue.<sup>4</sup> This 3-month improvement has also been consistent with the initial pilot, crossover, post market and RCT trial studies.<sup>5</sup> Moreover, PUL has immediate effects as it is a mechanical compression-only procedure. Therefore, reporting 3-month follow up outcomes would have allowed for more meaningful conclusions in the study.

Furthermore, the study by Tutrone et al unfortunately was missing a significant proportion of pre-procedure data, particularly in terms of functional outcomes (International Prostate Symptom Score, Sexual Health Inventory for Men, MSHEq ejaculatory function). More specifically, the preoperative data of 11 PUL patients (36.7%) and 11 Rezūm patients (47.8%) were missing in the study, further challenging any interpretation of the results of this study. Additionally, the authors should also acknowledge the lack of data regarding perioperative BPH medication use, median lobe treatments, number of Rezūm injections and number of PUL suture placements per procedure.

The authors report on a series of 53 men (30 patients on the Rezūm group and 23 patients on the Urolift group) treated by 1 of 11 surgeons. As the prior experience of each urologist has not been described in the paper, it will be important for the authors to consider the impacts on outcomes of inter-surgeon variability in their experience of each procedure (number of injections, number of PUL sutures).

Given the current cost-economic medical environment we currently practice, and the substantial costs associated to MISTs, a cost-analysis of the two new BPH systems should be performed. As we are aware, Rezūm is a fixed single cost disposable device (\$1500) with up to fifteen 9-seconds treatments while, Urolift costs \$900 per suture (with a mean 4-6 sutures per case) and requires multiple urethral re-entry to reload sutures.<sup>6</sup> Length of OR time, level of anesthesia, ancillary equipment and carbon footprint are also factors influencing total costs. Procedure durability and lifetime BPH costs ideally should be brought in to the discussion. Given the higher 5-year reported surgical failures for PUL compared to Rezūm (13.6% and 4.4%, respectively) the authors will need to closely monitor the surgical failure rates.<sup>7,8</sup> While 1-month outcomes are necessary to analyze and

report, the long term patient outcomes and perceptions of success is also important.

In conclusion, this study is notable as it is among the first single center prospective experience to compare Rezūm to another treatment modality. However, given the points raised in this letter, multiple components in the study design needs to be addressed in order to increase the scientific quality of the paper. For the time being, it will be important for readers to be careful in their interpretation of 1-month results before drawing further conclusions.

## Disclosures

Adel Arezki, Iman Sadri, Ahmed S. Zakaria, MD, and David-Dan Nguyen – none.

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