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# The Impact of Urethral Mucosa Preservation of Prostatic Apex During Monopolar Transurethral Resection of the Prostate on Postoperative Functional Outcomes: A Retrospective Comparat...

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1 intraoperative complications. Intraoperative bleeding and  
 2 postoperative transfusion rates have greatly decreased over  
 3 time and the incidence has since dropped to 0.4%–7.1%.  
 4 **Although previous series reported blood transfusion rates**  
 5 **of up to 22%.<sup>[21,22]</sup>** Our study revealed greater intraoperative  
 6 bleeding in Group A than in Group B, with a statistically  
 7 significant difference ( $305 \pm 63.4$  vs.  $212.5 \pm 65$ ,  $P < 0.0001$ ),  
 8 similar to previous reports.<sup>[5,6]</sup> These reports reported a similar  
 9 method of urethral mucosa preservation of the prostatic  
 10 apex during endourologic prostate resections of BPH with a  
 11 shorter operative time, less intraoperative bleeding, and low  
 12 postoperative urge UI incidence, as mentioned by Liang *et al.*  
 13 and Liu and Yang.<sup>[5,6]</sup>

14 The postoperative blood transfusion rate was observed in  
 15 one and three cases in Groups B and A, respectively. Mebust  
 16 *et al.* illustrate that over-resection in any prostate area might  
 17 expose venous sinuses and cause bleeding.<sup>[21]</sup> Consequently,  
 18 the urologist should be careful during apex resection due to  
 19 its thin wall to avoid venous sinus opening and bleeding.  
 20 Previous studies reported capsular perforation as an m-TURP  
 21 complication.<sup>[23]</sup> We observed no prostate capsular perforation,  
 22 TUR syndrome, urethral stricture, or hematuria in both groups.  
 23 Expectedly, we had no capsule perforation and lower rates  
 24 of complications in comparison to other research because all  
 25 surgeries in our study were conducted by a single academic  
 26 urologist with several years of experience in this field.

27 Previous studies reported a significant improvement in  
 28 IPSS score and Q max with or without apical prostate  
 29 resections.<sup>[5,6]</sup> Similarly, our study revealed IPSS score and  
 30 Q max improvement in both groups without statistically  
 31 significant differences during the 6-month follow-up period.  
 32 However, the long-term efficacy of this procedure remains  
 33 unknown, which requires further studies with more extended  
 34 assessment periods to follow this outcome method. Notably,  
 35 the follow-up period in Liu and Yang was 1 month, including  
 36 IPSS score and urge UI occurrence,<sup>[5]</sup> while our study extended  
 37 the follow-up to 6 months. In addition, we evaluated the  
 38 IIEF-5 score.

39 Erectile dysfunction has been indicated as one of the m-TURP  
 40 complications due to penile cavernosal nerve damage through  
 41 heat and cutting current. The cavernosal nerves of the penis  
 42 pass through the lateral prostate along its path and are closest  
 43 to the apex of the prostate, and from there, they enter the  
 44 cavernous bodies of the penis, thus heat damage in these  
 45 areas causes erectile dysfunction.<sup>[24]</sup> Our study revealed  
 46 no statistically significant difference in the evaluation  
 47 of erectile function based on the IIEF5 between the two  
 48 groups ( $P = 0.34$ ). However, Group B demonstrated more  
 49 improvements ( $14.50 \pm 3.74$  vs.  $15.67 \pm 4.42$ ).

50 The current study had some limitations. First, large prostates  
 51 of  $\geq 80$  ccs were excluded from the study. Second, preserving  
 52 the apex of the procedural outcome may be time dependent;  
 thus we indicate further studies with larger samples and better  
 randomization. Third, the postsurgical UI assessment has

insufficient data compared to the baseline and different variants  
 in the shape of the prostatic apex.<sup>[25]</sup> Fourth, this study includes  
 a small number of cases. We indicate further studies with a  
 larger sample size and better randomization. Finally, the study  
 was conducted in a single center.

## CONCLUSIONS

Our result indicated the association of the preserved urethral  
 mucosa of the prostate apex with a lower incidence of  
 postoperative urge UI, intraoperative blood loss, and shorter  
 operative length, thereby improving surgical efficiency.

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## Conflicts of interest

There are no conflicts of interest.

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