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# THE SIGNIFICANCE OF USING TRANSURETHRAL ENDOSCOPIC TREATMENT FOR BLADDER DIVERTICULUM

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**Abstract**
Bladder diverticula are uncommon in clinical practice, with men having a significantly higher prevalence compared to women. This condition is linked to prostate gland disorders that lead to urinary obstruction. While there are no exact figures on its occurrence, treatments typically involve surgery only if complications like residual urine, stones, or tumors arise. Traditional surgical methods for bladder diverticula removal, such as bladder resection or diverticulum neck plastic surgery, are often considered invasive and lengthy, limiting their use in patients with serious health conditions. However, advancements in medical technology have paved the way for minimally invasive transurethral endoscopic procedures as effective alternatives. These procedures are now commonly used for treating lower urinary tract conditions, even in elderly patients with significant comorbidities. Transurethral resection for prostate gland enlargement, in particular, is widely considered the optimal surgical approach for managing bladder diverticula in contemporary practice.Advancements in medical technology have revolutionized the treatment landscape for bladder diverticula. While traditional open surgical interventions were once the primary methods used, the introduction of minimally invasive transurethral endoscopic procedures has significantly improved outcomes and patient recovery times. These modern techniques offer high efficacy, minimal invasiveness, and a reduced risk of complications, making them an attractive option even for older patients with complex health conditions.

**Keywords**: diverticulae, transurethral resection, benign prostatic hyperplasia, bladder resection.

## Introduction

Bladder diverticulae have traditionally been viewed as a contraindication for transurethral resection in cases of benign prostatic hyperplasia due to challenges in removing resected tissue fragments and addressing the diverticulum itself. In instances where transurethral resection is deemed the best treatment option, a proposed approach involves initially performing open resection of the diverticulum followed by transurethral resection of the prostate gland a few weeks later. While this radical surgical method effectively addresses both conditions, it is highly invasive and necessitates an extended period of medical and social rehabilitation for patients. Currently, there is no consensus regarding the specific techniques for endoscopic operations, as well as the indications and contraindications for transurethral surgical interventions in managing this



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condition. The overall effectiveness of these methods is also unclear, and there is a lack of comprehensive research on both the immediate and long-term outcomes of surgical interventions. These unresolved issues highlight the ongoing importance of exploring endoscopic transurethral approaches for the treatment of bladder diverticulae.It is important to note that the management of bladder diverticulae presents a complex clinical challenge that requires careful consideration of various factors. While the proposed surgical approach combining open resection of the diverticulum with subsequent transurethral resection shows promise in addressing both the diverticulum and benign prostatic hyperplasia, it comes with significant drawbacks in terms of invasiveness and patient recovery. Given the lack of consensus and clear guidelines in the field, there is a pressing need for further research to determine the most effective and least invasive approaches to treating bladder diverticulae through endoscopic transurethral methods. Comprehensive studies evaluating the outcomes of such procedures are essential to establish best practices and improve patient care in this complex medical condition. Moving forward, collaborative efforts among healthcare providers, researchers, and experts in urology are crucial to advancing the understanding and treatment of bladder diverticulae. By investigating the efficacy and safety of different surgical techniques and protocols, we can refine our approach to managing this challenging condition and ultimately enhance the quality of care provided to patients.

**The purpose of the study**

Identification of the role of transurethral endoscopy in the comprehensive management of bladder diverticula.

**Materials and methods**

The study aimed to compare the outcomes of endoscopic treatment in 15 male patients with bladder diverticulum to a control group of 15 patients who underwent the same surgical procedure. The age of the patients ranged from 40 to 70 years. Indicators for surgical intervention included residual urine in the diverticulum cavity, diverticulum stones, suspected tumor or diverticulum tumor, and cases of diverticulitis resistant to conservative treatment. In the main group, all patients had infrared obstruction, 8 had benign prostatic hyperplasia, and 2 had bladder neck sclerosis confirmed by urodynamic and ultrasound tests. Among them, some also showed signs on ascending urethrography. Additionally, 2 patients had membranous urethra strictures. In the control group, 8 patients had good quality prostate hyperplasia, 2 had bladder neck sclerosis, 2 had undergone ureterosystoanastomosis with bladder diverticulum, and 1 had surgery solely due to a large amount of residual urine in the bladder diverticulum. The primary surgical approach involved endoscopic incision of the diverticulum neck, as well as diverticular ablation in 3 patients. All patients in the main group also underwent standard prostate resection.

**Results and discussion**

The outcomes of treating bladder diverticula using transurethral interventions were assessed in a study involving 15 patients in the main group and 5 patients in the control group during the early postoperative phase. Long-term results were monitored for up to 5 years post-intervention. The primary focus of the intervention was to improve urination normalization and reduce residual urine in the bladder and diverticulum, rather than completely eliminating the diverticulum. Postoperatively, diverticula were found to either completely disappear, decrease in size, or remain



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unchanged. Interestingly, the postoperative urination quality and residual urine amount were not always linked to the diverticulum's postoperative volume. Ultrasound and cystography revealed that in some patients, although the diverticulum size remained relatively large, the residual urine volume didn't exceed 50 - 100 ml. Evaluating the postoperative results of transurethral treatment using the Student test showed a significant reduction in diverticulum volume in patients just before they were discharged from the hospital. Notably, a reduction in diverticulum size was observed only in patients with diverticula up to 120 cm3, indicating a statistically significant change ($p < 0.05$), in contrast to patients with larger diverticula sizes where no substantial decrease was noted ($p > 0.05$).

## Conclusion

1. Urethrocystoscopy serves as the primary diagnostic and therapeutic approach in determining the management strategy for bladder diverticulae by examining the diverticulum cavity, potentially involving cutting its neck if necessary.
2. The preferred method for the transurethral endoscopic treatment of bladder diverticulae involves cutting the neck from a minimum of three locations, detrusor separation, and creating a broad anastomosis between the diverticulum and the bladder through parallel incisions, along with mucous membrane diverticulum coagulation and addressing bladder outflow obstruction.
3. Following endoscopic treatment of bladder diverticulae, it is crucial to carefully monitor the patient's condition, including the diverticulae and surrounding tissues, until proper urination recovery is achieved, utilizing ultrasound examinations and appropriate antibacterial therapy.
4. The outcomes of endoscopic treatment, such as reducing diverticulum size and residual urine in its cavity, can be evaluated six months post-operation. The efficacy of transurethral procedures is inversely related to the initial diverticulum volume and is somewhat lower than open resection of the bladder with the diverticulum. Nonetheless, the minimally invasive nature, short procedure duration, and swift patient recovery enable this method to be recommended as an alternative to open resection, particularly for patients with significant underlying health conditions.

## References

1.Roze F.Yu. Rezekt vrojdennogo divertikula mochevogo puzirya. Vrachebnoe Delo 1919, 4, pp. 99 - 102.
2. Rukovodstvo po klinicheskoy urologii (pod Ed. A.Ya. Pitelia)T2, M., "Media", 1970. s. 18-21.
3.Salaev. R.Yu. K voprosu diagnostic I lechenia istinnix diverticulov mochevogo puzirya. Azerbaydzhansky medisinsky Journal 1977, 1, pp. 70 - 77.
4.Subbosky. V.E. K voprosu O divertikule mochevogo puzirya I radikalnoy ego operasii. Sbornik nauchnix trudov, posvyatshenny 40-Letney nauchno vrachebnoy deyatelnosti B.N.Kholsova. s. 207 -217.
5. Temkin. I.S. Divertikuli mochevogo puzirya. Trudi 3-Go Vseoossiyskogo s'ezda urologov. L., 1936, p. 40-43.
6. Holsov. B.N. K voprosu OB operativnom udalenii vrojdennix ili istin Nix divertikulov mochevogo puzirya. Vestnik hirurgii I pogranichnix oblastey. 1930, 19, p. 64-68.
7. Shapatin. A.V. K diagnostics divertikulov mochevogo puzirya. Trudi nauch no-issledovatelskix institutov Sverdlovskogo oblzdravotlela. Sverdlovsk, 1937, SB. 8, p. 353 -358.
8. Adachi M, Nakada T. Transurethral treatment of bladder diverticula.



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Eur. Ural. 1991; 19; 104-108.

9. Benchekroun A; Lachkar A; Soumana A; Farih MH; Belahnech Z; Marzonk M; Faik M. Spontaneous rupture of bladder diverticulum. Apropos of a case. Ann Ural(Paris 1998;32 (6-7), pp. 367-369.

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