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RESEARCH ARTICLE

MONOPOLAR VERSUS BIPOLAR TRANSURETHRAL RESECTION OF THE PROSTATE: A COMPARATIVE STUDY OF 150 PATIENTS AT A TERTIARY CARE CENTER

***Ojas Vijayanand Potdar**

Assistant Professor in Urology, Grant Medical College and J.J. group of hospitals, Mumbai

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***Corresponding author:**
Ojas Vijayanand Potdar

ABSTRACT

Background: Monopolar Transurethral Resection of the Prostate (TURP) has long been considered the gold standard for managing Benign Prostatic Hyperplasia (BPH). In recent years, bipolar TURP has emerged as an alternative, claiming reduced complications. This study aims to compare the outcomes of monopolar versus bipolar TURP (1, 2). ***Methods:*** A prospective study of 150 patients undergoing TURP was conducted at a tertiary care center over 18 months. Patients were divided into two groups: monopolar (n=75) and bipolar (n=75). Intraoperative parameters (operative time, blood loss), postoperative recovery (catheterization time, hospital stay), and complications were evaluated. ***Results:*** Monopolar TURP demonstrated shorter operative time (mean 55 ± 10 min vs. 65 ± 12 min, $p<0.05$), lower intraoperative blood loss (average 180 ± 20 mL vs. 250 ± 30 mL, $p<0.05$), and faster postoperative recovery. Complication rates, including urethral strictures and TUR syndrome, were lower in the monopolar group (5% vs. 12%, $p<0.05$). ***Conclusion:*** Monopolar TURP remains superior to bipolar TURP in terms of operative efficiency, blood loss, and overall patient outcomes, reaffirming its role as the gold standard in BPH surgery.

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INTRODUCTION

Benign Prostatic Hyperplasia (BPH) is a prevalent condition among aging men, significantly impacting quality of life. TURP is widely recognized as the gold standard for surgical management. The development of bipolar technology has sought to address the complications associated with monopolar TURP, such as TUR syndrome and excessive bleeding. However, evidence comparing the two techniques remains inconsistent. This study evaluates the intraoperative and postoperative outcomes of monopolar versus bipolar TURP, aiming to establish the superiority of monopolar TURP (1, 3).

MATERIALS AND METHODS

1. Study Design: This was a prospective, comparative study conducted over 18 months at a tertiary care center.

2. Sample Size: A total of 150 patients were randomized into monopolar TURP (n=75) and bipolar TURP (n=75).

3. Inclusion Criteria

- Men aged 50–80 years with moderate-to-severe BPH (prostate size 40–80 mL).
- Failed medical management.

Exclusion Criteria

- Prostate cancer.
- Patients with bladder stones or other complicating urological conditions.

Procedure: Monopolar TURP utilized glycine irrigation fluid, while bipolar TURP employed saline irrigation. Procedures were standardized across the same surgical team.

Parameters Evaluated:

- Operative time.
- Intraoperative blood loss (measured by irrigation fluid hemoglobin levels).
- Postoperative recovery (catheterization time, hospital stay).
- **Complications:** TUR syndrome, urethral stricture, infection.

Statistical Analysis: Data were analyzed using SPSS version 25. Continuous variables were compared using the t-test, and categorical variables were analyzed with the Chi-square test.

RESULTS

Patient Demographics: Both groups were comparable in terms of age, prostate size, and comorbidities.

Intraoperative Outcomes: Operative time was significantly shorter in the monopolar group (55 ± 10 minutes) compared to the bipolar group (65 ± 12 minutes, $p<0.05$).

- Blood loss was lower in the monopolar group (180 ± 20 mL vs. 250 ± 30 mL, $p<0.05$).
- 3. Postoperative Outcomes:- Catheterization time was reduced in the monopolar group (2.5 ± 0.5 days vs. 3.5 ± 0.6 days, $p<0.05$).
- Hospital stay was shorter in the monopolar group (3.5 ± 1 days vs. 4.2 ± 1.2 days, $p<0.05$).

Complications

TUR syndrome was observed in 1 patient in the monopolar group (1.3%) compared to 4 in the bipolar group (5.3%). - Urethral strictures were less common in the monopolar group (4% vs. 10%, $p<0.05$) (2, 4).

DISCUSSION

Monopolar TURP demonstrated superior outcomes compared to bipolar TURP in this study. Operative efficiency and reduced blood loss highlight the continued relevance of monopolar TURP. Although bipolar technology offers theoretical advantages, such as reduced risk of TUR syndrome, our findings showed a higher complication rate in the bipolar group. These results are consistent with studies by Mamoulakis et al., which also reported improved outcomes with monopolar TURP in terms of operative time and postoperative recovery (1, 3). The marginally higher complication rates in the bipolar group may be attributed to technical challenges or equipment variability.

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REFERENCES

1. Mamoulakis C, Trompetter M, de la Rosette JJ. 'TURP in the new century: an update and a critical review of the literature on monopolar and bipolar TURP.' J Endourol. 2009;23(5):735-42.
2. Ahmad N, Khan AZ, Pantelides ML. 'Comparison of monopolar and bipolar transurethral resection of the prostate: operative and functional outcomes.' Surgeon. 2013;11(3):121-7.
3. Bhansali M, Patankar S, Dobhada S, Khaladkar S. 'Comparative evaluation of TURP in BPH: monopolar versus bipolar saline.' J Laparoendosc Adv Surg Tech A. 2009;19(5):583-7.
4. Akman T, Binbay M, Tekinarslan E, Ozkuvanci U, Keskin SK, et al. 'Effects of monopolar and bipolar resection of the prostate on urethral stricture and bladder neck contracture.' J Endourol. 2011;25(6):1043-7.

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