

COMPARISON OF OUT COME OF BIPOLAR TRANSURETHRAL VAPORIZATION (B-TUVP) WITH BIPOLAR TURP (TRANSURETHRAL RESECTION OF PROSTATE) IN PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA.  
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Hypothesis / aims of study

**Background:**  
Benign prostatic hyperplasia (BPH) contributes to the occurrence of lower urinary tract symptoms (LUTS) and the aberrant remodeling of the lower and upper urinary tract in individuals with noncancerous prostate enlargement.

**Objective:**  
The objective is to compare the outcomes of bipolar button plasma vaporization of the prostate with bipolar transurethral resection in the management of benign prostatic obstruction.

Study design, materials and methods

After approval by the IRB (institutional review board), hospital patient records were reviewed from March 9, 2022, to December 10, 2023. After identifying the relevant records, variables were extracted from these records. These variables included the duration of the surgery, length of hospital stay, duration of irrigation during surgery, catheterization, amount of blood loss, and the severity of the symptoms of the lower urinary tract.

BPO (noncancerous enlargement of the prostate gland) patients for the age group 50-65 were included. Among these patients who had difficulty in urinating with ultrasound confirmed enlarged prostate and no malignant cells on cytology were only included. Any patient who had a prior prostatic or lower urinary tract surgery or neurogenic bladder, diagnosis of prostate cancer or elevated PSA (>14 ng/dl), with any hard or nodular prostate as well as a significant finding on trans-rectal ultrasound of the prostate, were excluded. Any patient who had a response to medical therapy was also excluded.

After reviewing hospital records 62 patients met the selection criteria. Informed consent was obtained by contacting patients. All patients who had BPVP performed were categorized into group A. Those with bipolar TURP were put into group B. For both procedures, general anesthesia was used. The time for the surgery was defined as the time when anesthesia was administered, to the completion of the procedure, recorded in hours.

The amount of blood loss was calculated in milliliters of the blood collected into the suction drain and the amount of gauze soaked (1g=1ml). Pain levels were recorded using the vocal rating pain scale (0 to 10). The length of the hospital stay was also extracted.

The duration of irrigation was defined as the time required to irrigate the prostate during resection in hours usually assessed postoperatively. The time needed for catheter insertion was defined as catheter insertion.  
The International Prostate Scoring System (IPSS) was used to compare lower urinary tract 24 hours post-surgery. When the discharge fell below 20 milliliters per day the catheter was removed. SPSS version 20.0 was used to enter and analyze the data. Mean outcomes for both groups were compared using an independent sample t-test. A p-value of 0.05 was considered significant.

To maintain patient privacy and confidentiality patient data was de-identified before analysis. Personal identities which included names and addresses were removed to ensure patient privacy was maintained. A unique ID was assigned to each patient and access was limited to only authorized people.

To deal with potential biases steps were taken to make sure to reduce as much as possible. To avoid selection bias strict implementation of selection and exclusion criteria was done. Standardization of the data extraction process helped minimize information bias. An effort was made to ensure of complete extraction of data to avoid missing data.

Results and interpretation

	Group-I	Group-II
n	31	31
Age of the Patients	58.58 ± 4.59	57.67 ± 4.61
Duration of Symptoms	8.29 ± 1.1	8.32 ± 1.24

Table 1: Baseline characteristics of patients in both groups

	BPVP	TURP	p-value
n	31	31	
Time of Operation	45.51 ± 14.29	69.83 ± 32.08	0.0004
Irrigation Time	9.96 ± 2.9	12.87 ± 5.0	0.007
Catheterization Time	2.83 ± 0.82	4.96 ± 1.49	<0.0001
Hospital stay	3.32 ± 1.93	5.96 ± 1.44	<0.0001
Blood Loss	109.38 ± 33.04	197.25 ± 77.74	<0.0001
IPSS For LUTS	8.03 ± 3.73	8.77 ± 3.04	0.395

Table 2: The difference between the outcome of the two different surgical techniques

The mean age of the patients in group-I was 58.59±4.59 years while that in group-II was 57.67±4.61 years.  
The mean duration of symptoms in group-I was 8.29±1.10 whereas that in group-II was 8.32±1.24.  
The mean time of operation in group-I was 45.51±14.29 minutes while in group-II was 69.83±32.08 minutes.  
The mean hospital stay in group-I was 3.32±1.93 days while in group-II was 5.96±1.44 days.  
The mean IPSS for LUTS: Post-op in group-I was 8.03±3.72 and in group-II was 8.77±3.04.

Conclusion

The initial findings indicate that BPVP is comparatively safer than TURP, remarkably efficient, associated with less perioperative bleeding, and resulting in a shorter duration of hospitalization. When appropriate, we suggest utilizing BPVP as the initial surgical intervention for BPO.

References

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