COMPARISON OF PERIOPERATIVE AMOUNT OF BLOOD LOSS IN MONOPOLAR TRANSURETHRAL RESECTION OF PROSTATE WITH BIPOLAR TRANSURETHRAL RESECTION.

Abstract # 25233

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Hypothesis / aims of study

Surgical therapy of benign prostatic hyperplasia (BPH) is common, and includes both bipolar and monopolar transurethral resection of the prostate (TURP). When irrigation fluids are injected into a patient's urinary tract during a TURP procedure, the patient's blood chemistry might change. One of the most dreadful complications that might arise with a TURP is bleeding. This study set out to evaluate the similarities and differences in the perioperative blood loss experienced by patients undergoing monopolar vs. bipolar transurethral resection of the prostate for benign prostatic hyperplasia.

Study design, materials and methods

The study was conducted at Department of Urology and Renal transplantation, DHQ Hospital Gujranwala from 11-12-2018 to 11-6-2019. Informed consent about the study was taken from the patient. Male patients ages between 55 to 75 years having were enrolled in this study. Patients with bleeding disorder (Pt, INR > 1.5 times deranged), chronic liver disease (ALT & AST>40IU/L) and with uncontrolled hypertension (≥140/90) and diabetes mellitus (240 FBS) were excluded from study.

Sample size of 80 patients (40 patients in each group) was estimated by using 95% confidence internal with 80% power of test and taking expected mean blood loss 238.5±69.43ml with bipolar TURP and 289.6±89.47ml with monopolar TURP.[11] Prior to study 80 patients were divided into two equal groups by computer random number generated. Group A (unipolar diathermy) and Group B (multipolar diathermy) each had 40 individuals (bipolar diathermy). We have logged some demographic details.

The patient had a battery of tests, including a full blood count, urinalysis, and abdominal and pelvic ultrasound. Each subject in the Study had their preoperative hematocrit measured. Once 24 hours had passed since surgery, patients were checked on again to determine their hematocrit. The amount of blood lost during surgery was determined by comparing the pre- and post-op (after 24 hours) hematocrit readings. The researcher personally filled out the approved data collection form.

Hematocrit-based measurement of blood loss over the course of a full day following surgery. Patients with symptoms of micturition dysfunction and an enlarged prostate (>30 ml) on USG were classified as having benign prostatic hyperplasia. SPSS version 23 was utilised for data tabulation and analysis. Age, duration of BPH, prostate size, and blood loss were some of the quantitative data reported in the form of mean and standard deviation. Both groups' preoperative blood loss was compared using the t-test, with a p-value 0.05 considered significant. Age, duration of BPH, and prostate volume were used to separate the data. We utilized a t-test after stratifying the data, considering the results significant if the p-value was less than 0.05.

Results and interpretation

Table-1: Comparison of Perioperative blood loss (ml) in Both Groups

	Group-A	Group-B
N	40	40
Mean	325.22	240.0
SD	49.56	37.36
Minimum	221	171
Maximum	390	307

Table-2: Comparison of Perioperative blood loss (ml) in Both Groups stratified for age

	55-60 Years		61-65 Years		66-70 Years	
	Group-A	Group-B	Group-A	Group-B	Group-A	Group-B
	17	16	7	9	16	15
Mean	317.94	243.12	314.14	222.44	337.81	247.20
SD	60.45	36.01	50.02	38.45	34.64	37.27
p-value	0.000		0.001		0.000	

Table-3: Comparison of Perioperative blood loss (ml) in Both Groups stratified for duration of BPH

	1-3months		4-6months	
	Group-A	Group-B	Group-A	Group-B
	21	19	19	21
Mean	325.10	238.00	325.37	241.81
SD	54.14	36.44	45.45	38.99
p-value	0.000		0.000	

Table-4: Comparison of Perioperative blood loss (ml) in Both Groups stratified for Prostate size

	33-36		37-40		41-45	
	Group-A	Group-B	Group-A	Group-B	Group-A	Group-B
	12	16	9	11	19	13
Mean	311.66	240.06	343.77	241.09	325.00	239.00
SD	51.13	39.02	35.77	41.82	53.48	34.26
p-value	0.000		0.000		0.000	

Conclusion

Results of this study highlighted a significant difference in perioperative blood loss with bipolar TURP in patients with BPH. Based on these findings it can be said that bipolar resection is much more advantageous in patients undergoing TURP.

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