

MONOPOLAR VS BIPOLAR TRANSURETHRAL RESECTION OF PROSTATE REGARDING THE INCIDENCE OF POSTOPERATIVE URETHRAL STRICTURE: A PROSPECTIVE RANDOMIZED STUDY

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INTRODUCTION

Benign prostatic hyperplasia (BPH) is a very common illness affecting aged men, about half of patients will at some time need surgical intervention.

Monopolar TURP is considered as the gold standard for the surgical treatment of BPH. Multiple studies showed higher complication rates in M-TURP operations in patients with large prostate volumes. The risk of hemorrhage is also higher specially in patients with blood disorders.

Bipolar TURP, an electric current completes its circuit outside the body of the patients. This permits the use of saline as irrigating fluid, preventing the TUR syndrome and hyponatremia. Additionally B-TURP is associated with less bleeding and less operative time.

The incidence of urethral stricture after transurethral resection of prostate (TURP) ranges from 2.2 to 9.8%. Most of the cases occurs within 6 months of transurethral surgery. Presentation is likely with weak flow, infection or acute urinary retention.

The exact etiology of urethral stricture after TURP is still unknown. Suggested causes after TURP include infection, mechanical trauma, prolonged indwelling catheter time, local anesthesia, and electrical injury.

AIM OF THE WORK

To compare between the monopolar and bipolar TURP regarding the incidence of urethral stricture.

SUBJECTS AND METHODS

Study was prospectively conducted on 100 patients with BPH whom were divided into 2 groups (50) each in the department of genitourinary surgery, Alexandria main university hospital.

Informed consent was taken by all patients, history taking, pelvic examination and DRE, urine analysis and culture, kidney functions and abdominal U/S with PVR assessment.

At start of operation, routinely a diagnostic cystourethroscopy is done to exclude any anomaly, those with such anomalies were excluded from study.

A 26 Fr continuous flow resectoscope was used for both the techniques. All surgical procedures were performed by consultant urologists with an equivalent experience, under spinal anesthesia.

At the end of each procedure, a 22 Fr three-way Foley catheter was inserted, and continuous bladder irrigation was commenced with saline.

The patients were followed up with recording of Q-max at 3 and 6 months after surgery.

RESULTS

The median for the age of the 2 groups was the same 66.

The median for the prostate size was 60 in monopolar group and 73.5 in bipolar group.

The median for operation time was (62) minutes in Monopolar group while it was (70) minutes in the bipolar group.

Two cases (2 %) developed urethral stricture in the monopolar group while four cases (8 %) developed urethral stricture in the bipolar group.

Table 1: Comparison between the two studied groups according to site of stricture

Site of stricture	Type of TURP				c ²	MC _p
	Monopolar (n = 50)		Bipolar (n = 50)			
	No.	%	No.	%		
Negative	48	96.0	46	92.0	1.242	0.683
Bulbar	2	4.0	3	6.0		
Proximal Bulbar	0	0.0	1	2.0		

Table 2: Comparison between the two studied groups according to time of diagnosis

Time of diagnosis	Type of TURP		t	p
	Monopolar (n = 2)	Bipolar (n = 5)		
Min. – Max.	5.0 – 6.0	6.0 – 9.0	2.670*	0.044*
Mean ± SD.	5.50 ± 0.71	7.80 ± 1.10		
Median (IQR)	5.50 (5.0 – 6.0)	8.0 (8.0 – 8.0)		

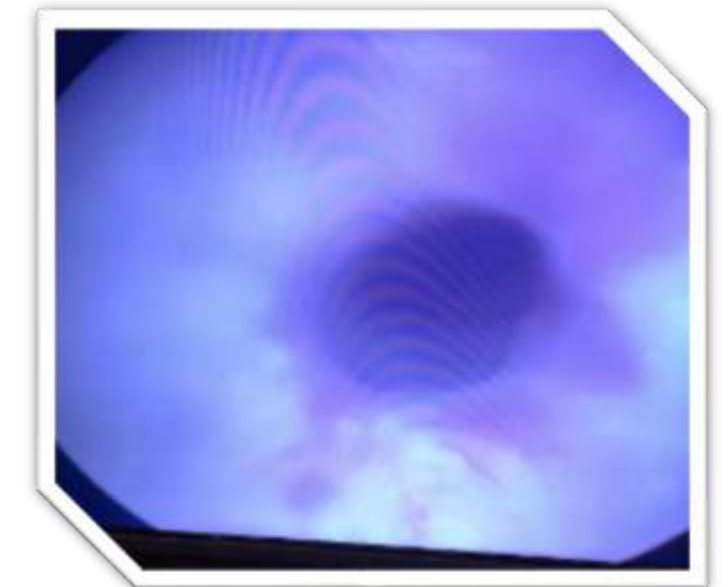


Figure: Endoscopic view of a bulbar urethral stricture post TURP

CONCLUSION

- There is no significant difference regarding the incidence of urethral stricture following 2 techniques of TURP.