بسم الله الرحمن الرحيم

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شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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Short-term Surgical Outcomes And Early Changes In Quality of Life after Monopolar- versus Bipolar Transurethral Resection of the Prostate

A Thesis

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بسم الله الرحمن الرحيم

قَالُوا سُبْحَانَكَ
لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا ﷺ
إِنَّكَ أَنتَ الْعَلِيمُ الْحَكِيمُ

صدق الله العظيم

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Ahmed Ramadan

Short-term surgical outcomes and early changes in quality of life after Monopolar- versus Bipolar Transurethral Resection of the Prostate

Abstract

Background: Transurethral resection of prostate (TURP) is currently the gold standard for surgical treatment of benign prostatic hyperplasia (BPH), as this procedure results in the best improvement in symptoms and urine flow rate **(1).**

Aim of the Work: to compare between the two techniques used for transurethral resection of the prostate; Monopolar versus Bipolar resection as regards short term surgical outcomes, perioperative complications and early changes in quality of life**..**
Patients and Methods: Randomized controlled study with simple randomization (1:1) of 80 patients with BPH candidate for transurethral resection of the prostate, 40 patients underwent M-TURP, and other 40 patients underwent B-TURP, their age mean age of patients included in our study 57-61 years old, mean prostate size 68-71 gm. **Results:**Comparing intra-operative data in monopolar and bipolar TURP groups, our study reported that there was statistically significant decrease in volume of irrigation and operative time in B-TURP group in comparison to M-TURP group. Although intra-operative complications; bleeding, electrolytes disturbance, fever and LUTS were lower in B-TURP group; however, did not reach statistically significant.

In M-TURP group, there was statistically significance increase in change Hb, and time of post-operative irrigation, IPSS in compared to B-TURP group. While in respect to PVR, time of catheterization and hospital stay, there was no statistically significant difference data among the two studied groups.

Conclusion: Bipolar TURP represents a promising endoscopic treatment for patients with BPH with decrease in volume of irrigation and reduced operative time, and less incidence of TUR syndrome, intraoperative bleeding, and postoperative complications. However, further investigations are needed with larger, preferably randomized multicentric controlled trials to confirm the results of this study in the future.

Key words: monopolar TURP, bipolar TURP.

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List of Abbreviations

ARI	Alpha Reductase Inhibitor
AUR	Acute Urinary Retention
BN	Bladder Neck
BOO	Bladder Outlet Obstruction
BPE	Benign Prostatic Enlargement
BPH	Benign Prostatic Hyperplasia
B-TURP	Bipolar Transurethral Resection Of The Prostate
CUR	Chronic Urinary Retention
ESU	Electrosurgical Unit
GFR	Glomerular Filtration Rate
HoLEP	Holmium Laser Enucleation Of The Prostate
IPSS	International Prostate Symptom Score
LUTS	Lower Urinary Tract Symptoms
ML	Median Lobe
M-TURP	Monopolar Transurethral Resection Of The Prostate
PAE	Prostate Artery Embolization
PDE5	Phosphodiesterase 5
PSA	Prostate-Specific Antigen
PVR	Post Voiding Residual
PZ	Peripheral Zone
SC	Surgical Capsule
TRUS	Transrectal Ultrasonography
TUR	Transurethral Resection
TURP	Transurethral Resection Of The Prostate
TZ	Transition Zone
UA	Urinalysis
UTI	Urinary Tract Infection

Introduction

Benign prostatic hyperplasia (BPH) is a frequent disease in aging men and is associated with bladder outlet obstruction. ***(Xie et al., 2012)***

There are several therapeutic options to consider on the basis of the symptoms and complications of LUTS and benign prostatic obstruction. These options include watchful waiting, pharmacological therapy, minimally invasive therapy, transurethral resection of the prostate (TURP), or open prostatectomy. ***(Tang et al., 2014)***

TURP using monopolar technology (M-TURP) is considered to be the gold standard conventional treatment of BPH, however it is associated with several adverse effects, including morbidity related to blood loss and disturbances of serum fluid and electrolytes balance. ***(Sugihara et al., 2012)***

Technical modifications of TURP with incorporations of bipolar technology (B-TURP) have two main advantages: first, patients can better tolerate sodium chloride solution and thus eliminate the risk of TURP syndrome. Second, the high-frequency current used minimizes tissue denaturation. ***(Abou-Taleb et al., 2017)***

Hematuria is common after TURP surgery and usually resolves by the time the patient is discharged. ***(Colau et al., 2001)***

Some patients have initial discomfort, a sense of urgency to urinate, or short-term difficulty controlling urination. These conditions slowly improve as recovery progresses, but it is important to remember that the longer the urinary problems existed before surgery, the longer it takes to regain full and normal bladder function after surgery. ***(Hartung and May, 2002)***

Up to 30 percent of men who undergo TURP experience problems with sexual function. Complete recovery of sexual function may take up to 1 year. The most common, long-term side effect of prostate surgery is retrograde ejaculation (dry climax), which results when the muscle that closes the bladder neck during ejaculation is removed along with the obstructing prostate tissue. ***(Hoffmann, 2005)***

Transurethral resection of the prostate (TURP) is not only clinically effective but also improves patients' quality of life. Although TURP is a standard surgical procedure in the BPH treatment, there are few studies that assess its impact on the quality of life, as a consequence of the