

## **The effect on the quality of life of patients using transurethral resection (TUR) in the treatment of patients with benign prostatic hyperplasia**

**Gulamov Mirfayz Khalilovich<sup>1</sup>, Usmonov Sultonjon Subxon o'g'li<sup>2</sup>**

Assitant department of urology, nephrology, hemodialysis and transplantology, Bukhara state medical institute

Republic of Uzbekistan, Bukhara

e-mail: Sulton290798@icloud.com.

**Abstract.** *This article presents the results of scientific studies conducted in various research institutes and clinics in the Russian Federation, Europe, the USA, and our country on patients of different ages suffering from benign prostatic hyperplasia. Specifically, it provides an analysis of the literature on research results regarding the epidemiology of prostatic hyperplasia, treatment methods, particularly surgical methods. Among the surgical procedures presented, information is given on the positive outcomes and impact on the quality of life of patients treated with the transurethral resection of the prostate method.*

**Key words:** *Benign prostatic hyperplasia, quality of life, prostate adenoma. Transurethral resection of prostate adenoma (TUR)*

### **Introduction**

Based on global statistical data, benign prostatic hyperplasia (BPH) affects 26-46% of men worldwide. In the Russian Federation, the incidence of this disease has increased by 72.4% over the past 10 years. This rise in cases can be attributed not only to the increase in diseases but also to the heightened attention of doctors to this condition. In the Russian Federation, approximately 12 million men suffer from BPH, making it the second most common condition after urinary tract infections. BPH causes infravesical obstruction, leading to difficulties in urination due to the compression of the urethra by the hyperplastic prostate tissue and spasms of the smooth muscles in the bladder and urethral segment.

#### **Treatment Methods:**

Both conservative and surgical methods are used to treat patients with BPH. Surgical methods for BPH aim to eliminate mechanical obstruction in the prostate part of the urethra. Recently, alongside historical open adenectomy, monopolar resection of the hyperplastic prostate tissue has been supplemented with more extensive and minimally invasive bipolar TURP (Transurethral Resection of the Prostate) and laser technologies. Despite the widespread use of highly effective conservative drugs in clinical practice, the number of patients requiring surgical

intervention for BPH is increasing. Indications for surgical treatment of BPH include recurrent urinary retention, infravesical obstruction, bladder stones, recurrent macroscopic hematuria, hydronephrosis due to BPH, and the accumulation of significant residual urine.

#### Common Surgical Methods:

Common surgical methods for BPH include monopolar and bipolar TURP, laser enucleation, vaporization, and vapor-resection of the prostate using holmium, thulium, and diode lasers (HoLEP, ThuLEP, ThFLEP), as well as bipolar transurethral enucleation of the prostate and open and endovideoscopic prostatectomy.

#### Transurethral Resection of the Prostate (TURP):

TURP is performed to reduce symptoms and improve the quality of life in patients with prostate volumes of 30 to 80 cm<sup>3</sup>. TURP has long been considered the “gold standard” for patients with prostate volumes up to 80 cm<sup>3</sup>. TURP is classified into “false (pseudo) TURP,” where hyperplastic tissue is partially removed, primarily from the bladder neck or central zone, creating a “channel” with 10-15% tissue removal, and “partial TURP,” where 30-80% of the tissue is resected. Partial TURP is further subdivided into palliative TURP, subtotal TURP, and total TURP (transurethral prostatectomy with 90-100% tissue removal).

#### Bipolar TURP:

Bipolar TURP is recommended for patients with prostate volumes of 30 to 80 cm<sup>3</sup> to reduce symptoms and improve quality of life. The technique for bipolar TURP is almost identical to standard TURP, but bipolar TURP uses a saline solution, and the energy does not pass through the patient’s entire body. The higher coagulation effect of bipolar TURP allows it to be used in patients prone to bleeding and those with pacemakers. This method reduces the risk of TUR syndrome, the volume of blood lost during surgery, and potential hemotompad complications.

#### Conclusion:

BPH is a widespread condition among men over 50, with an increasing incidence and younger age of onset in our country. Currently, BPH ranks second after urinary tract infections. Despite the widespread use of highly effective conservative drugs, the number of patients requiring surgical treatment for BPH is growing. Among surgical procedures, TURP is considered the “gold standard,” especially the highly effective bipolar TURP. This method significantly reduces complications, shortens operation time and hospital stays, and has proven effective in 80% of patients, with Qmax improving by 163%, IPSS scores decreasing by 70%, residual urine volume reducing by 77%, and quality of life improving by 69%, as confirmed by numerous studies and recommendations from the European Association of Urology.

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