

# Incidental Prostatic Adenoma Mimicking Bladder Tumor in a Patient with Previous History of Holmium Laser Prostate Enucleation Surgery

## Daha Önce Holmiyum Lazer Prostat Enükleasyonu Ameliyatı Olan Bir Hastada Mesane Tümörünü Taklit Eden Rastlantısal Prostat Adenomunu

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**ABSTRACT** Holmium laser enucleation of the prostate (HoLEP) surgery has been increasingly used in urology because of its advantages for benign prostatic hyperplasia (BPH) surgical treatment in recent years. But, there are insufficient data in literature about the true frequency of the incidental presence of prostatic adenoma within the bladder following HoLEP surgery. The case is here presented of a patient who underwent HoLEP surgery 5 years previously, then presented at our clinic with lower urinary tract symptoms. On ultrasonography, a suspicious 3×3 cm tumoral formation was determined within the bladder trigone. Cystoscopy was performed, and the freeform mass floating in the bladder was seen. The mass was excised with bipolar transurethral resection of the prostate. The pathology examination was reported as BPH. The current case demonstrates the need for surgeons to bear in mind that there could be incidental adenoma in patients with BPH who have not fully healed following HoLEP surgery.

**Keywords:** Transurethral resection of prostate; lasers; solid-state; urinary bladder neoplasms

**ÖZET** Holmiyum lazer prostat enükleasyonu (HoLEP) cerrahisi avantajları nedeniyle son yıllarda giderek artan şekilde benign prostat hiperplazisi (BPH) cerrahisinde kullanılmaktadır. Fakat HoLEP cerrahisini takiben mesanede tesadüfen saptanabilecek rezidü prostat adenomu varlığının gerçek sıklığı hakkında literatürde yeterli veri yoktur. Olgu takdimimizde 5 yıl önce HoLEP cerrahisi geçiren ve daha sonra kliniğimize alt üriner sistem semptomları ile başvuran bir hasta sunulmaktadır. Hastanın ultrasonografisinde mesane trigonunda şüpheli 3×3 cm tümöral oluşum tespit edildi. Sistoskopi yapıldı ve mesanede yüzen serbest formlu kitlenin prostat adenomu olduğu görüldü. Kitle bipolar transüretal prostat rezeksiyonu ile çıkarıldı. Patoloji incelemesi BPH olarak raporlandı. Takiplerinde postoperatif 4. ayda hastanın aktif ürolojik şikâyeti yoktu. Mevcut olgu, HoLEP cerrahisini takiben tam olarak iyileşmeyen BPH hastalarında rastlantısal prostat adenomu olabileceğini cerrahların akılda tutması gerektiğini göstermektedir.

**Anahtar Kelimeler:** Prostatın transüretal rezeksiyonu; lazerler; katı-hâl; mesane neoplazileri

Benign prostatic hyperplasia (BPH) is a health problem seen in males at older ages, which progresses with lower urinary tract symptoms, and when not treated sufficiently, serious problems occur such as stone formation in the bladder, hematuria and kidney failure. Depending on symptom severity, treatment may be observation, medical treatment, and surgery for patients with no response.<sup>1</sup> In recent years, holmium laser enucleation of the prostate (HoLEP) operations have started to be used more

than, transurethral resection of the prostate (TURP) surgery and the relatively longer-established open surgery.<sup>2</sup> Standardisation has not yet been obtained in the enucleation technique, and it is a new technique in respect of known surgery-related complications.<sup>3</sup> Therefore, feedback gained from literature is of great importance. The case is here presented of a patient who had previously undergone HoLEP operation and was incidentally determined with residual prostate adenoma mimicking a tumour within the bladder.

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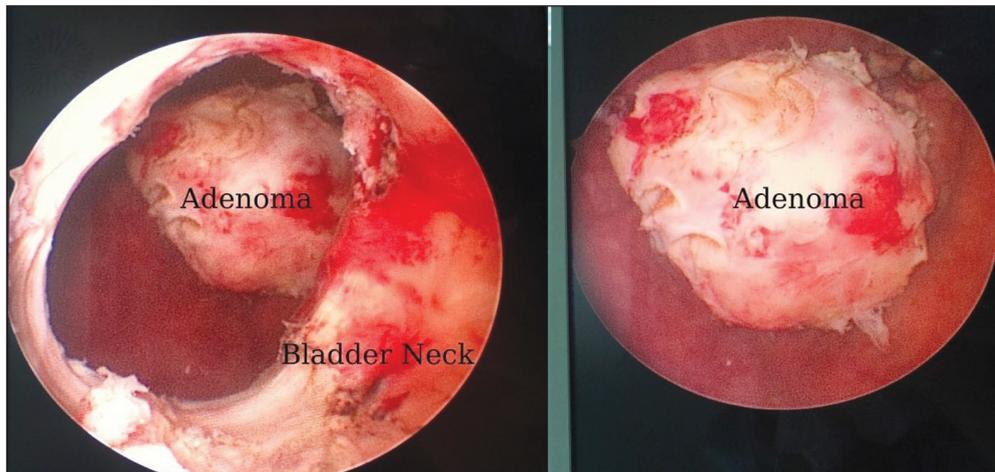


FIGURE 1: View of the prostatic adenoma.

## CASE REPORT

Informed consent from the patient was provided. A 71-year-old male presented at our urology clinic with complaints of burning on urination, difficulty in urination and intermittent urination, which had been ongoing for 5 years and were recently increasingly unresponsive to medical treatment. In the patient history there was peripheral artery disease and 5 years previously a HoLEP operation. In that previous operation the pathology report was of BPH. The international prostate symptom score (IPSS) of the patient was 25, and serum blood urea nitrogen was measured as 11 mg/dL, creatinine as 0.59 mg/dL, and total prostate specific antigen as 4.6 ng/dL. In the urine analysis, nitrite was negative and leukocytes were 14. In uroflowmetry, maximum flow (Qmax) was 8 mL/sec, average flow was 5 mL/sec and the urinated volume was 220 cc. In the urinary ultrasound examination, a 3×3 cm tumoral formation was observed within the bladder trigone, a defect in the prostatic fossa probably due to the operation, post micturition residue was not significant at 50 cc, and the upper urinary system was normal. After determination of the urine culture as sterile, cystoscopy was performed. The anterior urethra was observed to be normal and the prostatic fossa was clear. A single, smooth-surfaced, solid piece of prostate adenoma tissue, 3×3 cm in size, was observed to be floating free within the bladder (Figure 1). In the same session, tissue resection was performed with a bipolar TURP operation



FIGURE 2: Pathological material.

(Figure 2). Then, continuous flow bladder irrigation was applied with a 3-way Foley catheter. In the postoperative second hour the irrigation was terminated as there was no bleeding. On postoperative day one, the general condition of the patient was good and vital signs were stable, so the catheter was removed and the patient was discharged. The pathology examination was reported as prostatic nodular hyperplasia. In the follow-up examination at one month postoperatively, the IPSS score of the patient was 6, and in uroflowmetry, Qmax was 22 mL/sec, average flow was 18 mL/sec, and the urinated volume was 275 cc. The patient has been under follow-up for ap-

proximately 4 months and to date there have been no active urological complaints.

## DISCUSSION

Lower urinary tract symptoms are seen in patients as one or several problems occurring while urine accumulates in the bladder or during and after urination. Following several diseases such as simple urinary tract infection, BPH, or foreign body in the bladder, lower urinary tract symptoms may develop.<sup>4</sup> After the age of 40 years, the frequency of BPH increases and by the age of 90 years, it is seen in 90% of males.<sup>5</sup> When evaluating patients, first the medical history should be questioned, then it is recommended that the severity of the disease is determined using a validated symptom score. While lifestyle recommendations are sufficient for mild forms, as the symptom score increases, medical treatment is applied and surgery for non-responsive patients.<sup>6</sup>

A surgical method was selected for the current patient as there was a history of operation, complaints had not reduced, and there was an appearance of a possibly tumoral mass in the bladder trigone. It was seen that the problem experienced by this patient was due to a prostate adenoma left in the bladder following HoLEP surgery. It is difficult to imagine foreign bodies in the bladder, and the visualisation of residual prostate adenoma is a very new situation for the literature.<sup>7</sup>

After performing enucleation of prostatic adenoma without perforating the capsule using holmium:yttrium-aluminium garnet laser, HoLEP is a surgical method which completes morcellation of the adenoma tissue in the bladder. Although HoLEP surgery is primarily used as an alternative to open surgery in patients with BPH>80 g, it has now started to be used in cases with lower prostate volume. The learning curve for this surgical method is an average of 50 patients, and it has been reported that this curve can be shortened by performing the first operations under the guidance of a mentor.<sup>8</sup>

It has been determined that complications may be seen such as intraoperative bladder injury (0-13%), conversion to transurethral resection (0-23%), prostate capsule perforation 80-43%, and in the post-

operative period, urinary retention (0-13%), hematuria (0-12%) urinary tract infection (0-15%), blood transfusion (0-2%), incontinence (3-56%), and urethral stricture (4.7%). For reasons such as lack of experience of the surgeon, difficulty following the enucleation line may cause intraoperative bleeding causing residual prostate tissue to remain in the prostatic fossa.<sup>9</sup> However, there is no clear opinion on the subject of the presence of residual free adenoma within the bladder. It can be considered that at the beginning of the learning curve, because of the fear of injury to the bladder and ureter, insufficient morcellation is applied or there is a need for emergency intervention before removing sufficient tissue because of encountering perforation at this stage. In the current patient, this condition was not noticed and the necessary additional intervention was not applied. Therefore, as there are not data about the actual frequency of this, surgeons can benefit from literature about these types of complications and be prepared for uncommon situations which may be encountered postoperatively.

As a conclusion, together with the increasing use of HoLEP operations in recent years, many more urologists are recommending this method of surgical treatment for BPH. However, the operational technique to be applied is still at the stage of development. In addition, a standard rate has not been obtained between centres in respect of complication rates. There are insufficient data on the subject of the actual frequency of adenoma that can be determined incidentally in the bladder after surgery. This condition diminishes quality of life for the patient and lowers the success rate of treatment. The case presented here shows the importance of providing the necessary treatment in the early stage and that residual masses within the bladder should not be overlooked in patients with persistent lower urinary tract symptoms after HoLEP surgery.

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### Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

### Authorship Contributions

**Idea/Concept:** Aykut Demirci, Oğuzhan Ceylan; **Design:** Aykut Demirci, Oğuzhan Ceylan; **Control/Supervision:** Aykut Demirci, Hilal Başar, Oğuzhan Ceylan; **Data Collection and/or Processing:** Aykut Demirci, Oğuzhan Ceylan; **Analysis and/or Interpretation:** Aykut Demirci, Oğuzhan Ceylan, Halil Başar; **Literature Review:** Aykut Demirci, Oğuzhan Ceylan; **Writing the Article:** Aykut Demirci; **Critical Review:** Aykut Demirci, Hilal Başar; **References and Fundings:** Hilal Başar; **Materials:** Aykut Demirci, Hilal Başar, Oğuzhan Ceylan.

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