

## Does transurethral resection of prostate surgery really lead to pancreatitis? A rare case report

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### ABSTRACT

Transurethral resection of the prostate (TURP) remains the gold standard surgical treatment for symptomatic benign prostatic hyperplasia (BPH). TURP is generally safe and effective, with well-recognized complications such as bleeding, infection, electrolyte imbalance, and transurethral resection syndrome. However, non-urological complications are rare. Acute pancreatitis following TURP has been reported only sporadically in the literature. We report a case of an 82-year-old male who developed acute pancreatitis following bipolar TURP. To our knowledge, this is the first reported case of acute pancreatitis following TURP from Nepal.

**Keywords:** Acute pancreatitis, bipolar transurethral resection of prostate.

### INTRODUCTION

Transurethral resection of the prostate (TURP) is gold standard surgical treatment for symptomatic benign prostatic hyperplasia (BPH). We report a rare case of development of acute pancreatitis after TURP

An 82-year-old male, a former occasional smoker and alcohol drinker, but abstinent for 10 years, was referred to Devdaha Medical College and Research Institute with a diagnosis of acute urinary retention due to benign prostatic enlargement. He was on a Foley catheter for 20 days. He had no history of diabetes, tuberculosis, hypertension, gall bladder disease, or pancreatitis. Baseline blood investigations: complete blood count, renal function tests, coagulation profile, serology for HIV/HBsAg/HCV, urine analysis, and urine culture and sensitivity were normal. Prostate-specific antigen was 2.34 ng/ml. Electrocardiography and chest radiography were normal. Abdominal ultrasonography revealed a prostate volume of 32 ml, with no other abnormalities.

After pre-anesthetic clearance, the patient

underwent bipolar TURP using normal saline 0.9% as irrigation fluid, under spinal anesthesia. Prophylactic intravenous ceftriaxone (1 gm) was administered 30 minutes before the procedure. The duration of operation was 40 minutes, with 12 gm of resected prostatic tissues. At the end of the procedure, intravenous furosemide (20 mg) and tranexamic acid (1 g) were given as the routine prescription. The intra-operative course was normal with stable hemodynamic parameters. The patient was shifted to the postoperative ward and maintained on intravenous fluids (Ringer's lactate, normal saline, and 5% dextrose, total 3 liters/day) and medications, including ceftriaxone, ranitidine, ketorolac, and ondansetron. The postoperative course was uneventful, with stable blood parameters, and he was transferred to the general ward the next day.

On the evening of the first postoperative day in the surgical ward, shortly after consuming rice, vegetables, and soup, the patient experienced sudden severe epigastric pain accompanied by repeated vomiting. He assumed a leaning-forward posture for relief. The duty doctor administered ketorolac and hyoscine butyl bromide, started IV fluids, and later gave tramadol to relieve the abdominal pain. Despite partial pain relief, his symptoms persisted. Laboratory investigations (complete blood count, renal function tests, liver function test, lipid profile, serum amylase, lipase,

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and CK-MB, troponin I) were sent. The laboratory report: Amylase was 1400 U/L (n=23-85U/L) and lipase was 1200 U/L (n=0-160 U/L), hemoglobin was 9.8 gm/dl, and other investigations, including CK-MB, Troponin I were normal. The repeated serum Lipase was 1703.1 U/L.

The patient was shifted to the intensive care unit with a diagnosis of Acute Pancreatitis after repeated Lipase reports. It was 40 hours after the TURP procedure. The patient was kept nil per oral and managed with intravenous fluids and analgesics. He got a transfusion of two unit of blood on the following day. The next day, the Contrast-Enhanced Computed Tomography (CT) abdomen and pelvis report was conclusive to "Acute moderate pancreatitis- modified CT severity index: 4" (Fig. 1)

The patient improved gradually, with resolution of pain and normalization with supportive management. He was started on a clear liquid diet after 3 days, and the Foley catheter was removed on postoperative day 5. He was discharged in stable condition on day 6.



**Fig 1: Heterogenous attenuation of pancreatic head**

### Computer Tomography report

Mildly heterogeneous head of pancreas.

- Intra-abdominal fat thickening / stranding in right subhepatic region, peripancreatic region and RIF with e/o right anterior and posterior renal fascia and lateroconal fascia thickening and peritoneal thickening in right side along with mesenteric fat stranding.
- Mild fluid collection in abdomen and pelvis.
- B/L minimal pleural effusion.
- Thickened and edematous GB wall with

small hyperdense area in dependent part of GB lumen (likely dense sludge)- Likely features of acute moderate pancreatitis (modified CT severity index: 4).Sub-optimally filled urinary bladder with hyperdense content within (likely blood clot).• B/L renal simple cortical cysts (BOSNIAK category I).

### DISCUSSION

TURP is a commonly performed urological procedure with relatively low morbidity, and its complications are usually related to bleeding, infection, or TURP syndrome.<sup>1</sup> However, rare systemic complications involving other organ systems have occasionally been described in the literature.<sup>2</sup> Acute pancreatitis is an inflammatory condition of the pancreas diagnosed when at least two of the following three criteria are present: characteristic abdominal pain suggestive of pancreatitis, elevated serum amylase or lipase levels, and radiological findings consistent with pancreatitis on ultrasonography, computed tomography, or magnetic resonance imaging.<sup>3,4</sup> In the present case, the patient developed severe epigastric pain and repeated vomiting approximately 40 hours after surgery, shortly after resuming a normal diet. The clinical presentation, together with markedly elevated serum lipase and amylase levels, was consistent with acute pancreatitis. Contrast-enhanced computed tomography further confirmed the diagnosis. Acute pancreatitis commonly presents with severe epigastric pain radiating to the back, associated with elevated pancreatic enzymes and supportive imaging findings.<sup>3,4</sup>

Several perioperative medications administered in this case, including furosemide, ceftriaxone, and ranitidine, have previously been implicated in drug-induced pancreatitis.<sup>5,6</sup> Furosemide may cause pancreatic ischemia through volume depletion and reduced pancreatic perfusion, whereas ceftriaxone has been associated with biliary sludge formation. Ranitidine has also been linked to isolated cases of pancreatitis. In addition, postoperative stress and ischemia-related mechanisms should be considered, particularly in elderly patients undergoing surgery.<sup>5</sup>

To our knowledge, this is the first reported

case from Nepal describing acute pancreatitis following transurethral resection of the prostate (TURP). Nevertheless, the exact etiology in this patient remains uncertain. The pathophysiological association between TURP and acute pancreatitis is not clearly understood.<sup>7</sup> Proposed mechanisms include pancreatic ischemia secondary to perioperative hemodynamic disturbances, systemic inflammatory responses triggered by surgical stress, and microcirculatory impairment. TURP syndrome was considered unlikely in this patient because serum sodium levels remained normal, bipolar TURP was performed using isotonic normal saline irrigation, and no significant intraoperative hemodynamic instability was documented. Given the rarity of this association and the presence of multiple potential etiological factors, the diagnosis was largely one of exclusion.

The patient improved with conservative management, including bowel rest, intravenous fluids, analgesia, and supportive care. Two units of blood transfusion were also administered during the course of treatment. This approach is consistent with the standard management of mild-to-moderate acute pancreatitis. No invasive intervention was required, and the patient recovered without complications. The favorable clinical outcome suggests a transient, possibly drug-induced or stress-related episode of acute pancreatitis.<sup>5</sup>

## CONCLUSION

This case highlights acute pancreatitis as a rare and unusual postoperative complication following bipolar TURP. Although a definitive causal relationship between TURP and pancreatitis could not be established, clinicians should remain aware of the possibility of atypical systemic complications in elderly patients undergoing endourological procedures. Early recognition of characteristic symptoms, prompt biochemical evaluation, and timely supportive management are essential for favorable outcomes and may help avoid unnecessary interventions. Further studies and case reports are needed to better understand the potential association between TURP and acute pancreatitis.

## REFERENCES

1. Rassweiler J, Teber D, Kuntz R, Hofmann R. Complications of transurethral resection of the prostate (TURP)—incidence, management, and prevention. *European urology*. 2006 Nov 1;50(5):969-80.
2. Grandez-Urbina JA, Santillan-Romero A, Corrales-Acosta M, Tejeda-Mariaca JE, Fernandez-Luque JL. Case Report: Acute pancreatitis as a complication for the use of furosemide during transurethral resection of the prostate. *F1000Research*. 2019 Dec 3;8:2051.
3. Kiriya S, Gabata T, Takada T, Hirata K, Yoshida M, Mayumi T, Hirota M, Kadoya M, Yamanouchi E, Hattori T, Takeda K. New diagnostic criteria of acute pancreatitis. *Journal of hepato-biliary-pancreatic sciences*. 2010 Jan;17(1):24-36.
4. Mederos MA, Reber HA, Girgis MD. Acute pancreatitis: a review. *Jama*. 2021 Jan 26;325(4):382-90.
5. Balani AR, Grendell JH. Drug-induced pancreatitis: incidence, management and prevention. *Drug safety*. 2008 Oct;31(10):823-37.
6. Bartegi I, Mnif K, Boughariou I, Sahnoun R, Hmida SB, Jemaa TB, Hammami S, Koubaa M, Hammami B, Zghal K, Marrakchi C. Ceftriaxone induced pancreatitis: a case report with review of literature. *IDCases*. 2025 May 28:e02273.
7. Wiley MB, Mehrotra K, Bauer J, Yazici C, Bialkowska AB, Jung B. Acute pancreatitis: current clinical approaches, molecular pathophysiology, and potential therapeutics. *Pancreas*. 2023 Jul 1;52(6):e335-43.