GSAR Journal of Applied Medical Sciences ISSN: 2584-2323 (Online)

GSAR Journal of Applied Medical Sciences
ISSN: 2584-2323 (Online)
Frequency: Monthly
Published By GSAR Publishers
Journal Homepage Link- https://gsarpublishers.com/gsarjams-home/

IMPROVISED SUPRAPUBIC CATHETERIZATION USING A LAPAROSCOPIC PORT IN A PATIENT WITH ACUTE ON CHRONIC URINARY RETENTION: A CASE REPORT

By

PO Igwe[1,2] , C Chuaken[1]

[1]Colorectal and Minimal Access, General Surgery Unit, Department of Surgery, University of Port Harcourt Teaching Hospital(UPTH), Port Harcourt, Rivers State, Nigeria.

[2]Immaculate Conception endoscopy and Minimal Access Surgery specialist (ICE MASS), Ozuoba, Port Harcourt, Rivers State, Nigeria.

Article History

Received: 15/12/2025
Accepted: 26/12/2025
Published: 29/12/2025

Vol – 2 Issue –12

PP: -27-29

Abstract

Background: Suprapubic catheterization (SPC) is an essential procedure for urinary diversion when urethral catheterization fails. Standard SPC kits may not always be available in low-resource settings, necessitating improvised but safe approaches.[1]

Case Presentation: *We report the case of a 69-year-old male with a history of hypertension and benign prostatic enlargement (BPE) who presented with acute on chronic urinary retention and bleeding per rectum.*

Intervention: *Following a failed urethral catheterization attempt, an improvised SPC was successfully performed using a laparoscopic port and trocar.*

Conclusion: *This case demonstrates that improvised SPC techniques can offer safe and effective urinary diversion where standard equipment is unavailable.[2–4]*

Introduction

Acute urinary retention (AUR) is a common urological emergency and affects predominantly elderly men with benign prostatic enlargement.[5] It requires urgent bladder decompression to prevent complications such as hydronephrosis, post-renal kidney injury, severe discomfort, and infection.[6]

When urethral catheterization fails—often due to prostatic obstruction, urethral stricture, or false passage—SPC becomes the recommended next step.[1–3] The use of SPC has been well standardized with guidelines outlining safe practice.[2] However, in many facilities across low-resource regions, dedicated SPC kits may not be available, requiring clinicians to improvise using sterile instruments that provide similar functionality.[47]

Improvised suprapubic access using laparoscopic ports has been scarcely described in literature but offers a simple, effective solution where resources are limited. This case highlights such an approach.

Case Presentation

Mr. E.F. is a 69-year-old male, known hypertensive on routine medications with a 5-year history of benign prostatic enlargement (BPE) diagnosed at a peripheral hospital.

He presented with:

- Acute inability to pass urine for approximately 18 hours
- Progressive suprapubic swelling and discomfort
- Intermittent bleeding per rectum for 2 weeks
- History of lower urinary tract symptoms (poor stream, straining, nocturia)

He was referred to our centre for diagnostic colonoscopy because of the rectal bleeding.

Examination Findings

- Afebrile, BP 143/88 mmHg, pulse 86 bpm
- Distended, tender suprapubic region
- Palpable bladder
- Digital rectal examination: markedly enlarged, smooth prostate (consistent with BPE)

*Corresponding Author: **PO Igwe.***

© Copyright 2025 GSAR Publishers All Rights Reserved

This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

Initial attempts at urethral catheterization using size 16 and 18 Foley catheters were unsuccessful—likely due to obstruction from the enlarged prostate.

Given progressive discomfort and inability to void, SPC was indicated before the colonoscopy.[24]

Intervention

A decision was made to perform suprapubic catheterization using an improvised method because no SPC kit was immediately available.

Procedure Details

- Date performed: 26/11/2025
- Setting: minor procedure room
- Anesthesia: local infiltration with 2% lidocaine
- The bladder was confirmed full by percussion and aspiration [23]
- The suprapubic region was cleaned and draped.
- A 5mm disposable laparoscopic port with its plastic trocar was prepared as the access tool.
- The trocar was inserted at a 10–15° angle just above the pubic symphysis, in line with established SPC technique principles.[3]
- Entry into the bladder was confirmed by an immediate gush of urine through the trocar sheath.
- A Foley catheter was advanced through the port and secured.

Figure1: Incision above pubic symphysis

The entire procedure lasted 10 minutes, and there were no complications.

Figure 2: Cannula introduced

Figure 3: Catheter insitu, Canula withdrawn.

Outcome and Follow-Up

The SPC drained over 1.8 L of urine within the first hour, with rapid symptom relief.
Post-procedure vitals remained stable.
The patient reported significant improvement in pain and abdominal fullness.

Plans included:

- Urology consultation for BPE management
- Medical optimization of hypertension

He was discharged with instructions on catheter care and follow-up by a urologist.

Discussion

Acute on chronic urinary retention is frequently secondary to BPE, and urgent bladder decompression is critical.[56] Urethral catheterization may fail in up to 10–15% of men with severe obstruction.[7] When this occurs, SPC is recommended.[2]

Improvised SPC: Clinical Justification

In resource-limited settings, challenges include:

- Lack of dedicated SPC kits
- Limited access to ultrasound guidance
- Emergency need for decompression

Laparoscopic ports share similar design principles with SPC trocars:

- Sharp obturator for controlled puncture
- Hollow sheath for passage of instruments
- Ability to maintain an access tract

This makes them a safe alternative when used with proper technique.[478] The risk of bowel injury remains a concern, especially if the bladder is poorly distended—but this risk is minimized with ultrasound confirmation and landmark-based entry.[23]

Conclusion

Improvised SPC using a laparoscopic port is a safe and practical option when standard kits are unavailable. With proper patient selection and technique, this method can prevent complications of prolonged urinary retention while supporting emergency care in resource-limited settings.

No conflict of interest.

*Corresponding Author: **PO Igwe.**
© Copyright 2025 GSAR Publishers All Rights Reserved

This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

No source of funding was obtained.
Consent was obtained from patient.

References

1. Ahluwalia RS et al. The surgical risk of suprapubic catheter insertion. Ann R Coll Surg Engl. 2006;88:210–3.
2. Harrison SCW et al. BAUS suprapubic catheter guidelines. BJU Int. 2011;107:77–85.
3. Vaidyanathan S et al. Safe technique for SPC insertion. Spinal Cord. 1998;36:409–14.
4. Verma S, Sahai A. Alternatives to standard SPC. Urol Ann. 2015;7:21–7.
5. Horgan AF et al. AUR and catheterization comparison. Br J Urol. 1992;70:149–51.
6. Emberton M, et al. Acute urinary retention epidemiology. BJU Int. 2000;85:186–95.
7. O'Kelly F et al. Resource-adapted urological procedures. World J Urol. 2019;37:2499–506.
8. Bennett J et al. Laparoscopic trocar use in emergencies. Surg Endosc. 2005;19:367–72.
9. Ahluwalia P et al. Urethral catheterization complications. Urology. 2004;64:123–7.
10. Kaplan SA. Management of BPH complications. Urol Clin North Am. 1990;17:661–70.

*Corresponding Author: **PO Igwe.**
© Copyright 2025 GSAR Publishers All Rights Reserved
This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.