ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25dec142

Recurrent Urinary Retention in a Postmenopausal Woman Secondary to Pedunculated Cervical Myoma: A Case Report at Iringa Regional Referral Hospital in Tanzania

Chrisantus Ngongi[1]; Alfred Mwakalebela, Laison[2]; Christopher Meshack Mzimya[3]; Ally Jack Msonga[4]; Frank Anthony Malika[5]; Andrea R Modest[6]

[1;2;3;4;5;6]Iringa Regional Referral Hospital[1] & Modest NextGen Solutions[6]

Publication Date: 2025/12/15

Abstract:

- ***Background:***

Recurrent urinary retention in postmenopausal women is uncommon and may result from obstructive pelvic masses, including cervical myomas. Pedunculated cervical myomas are rare and can be misdiagnosed on imaging, leading to delays in definitive treatment.

- ***Case Presentation:***

A 68-year-old woman (P2 L2) from Iringa, Tanzania, presented with a 10month history of incomplete bladder emptying and recurrent urinary retention. Her condition gradually progressed from partial to complete retention, initially managed with urethral catheterization and metal dilation (urethral bouginage) with partial relief. She had no prior pelvic surgeries, trauma, or neurological deficits, and her medical history was notable only for well-controlled hypertension.

The patient had multiple admissions for recurrent urinary retention. In July 2025, she underwent laparotomy for suspected abdominal pathology, and an inflamed appendix was removed, without relief of urinary symptoms. In August 2025, evaluation revealed a firm, non-tender mass palpable through the posterior fornix on per vaginal examination. Laboratory investigations were unremarkable. Ultrasound demonstrated a large adnexal cystic mass, while CT imaging suggested a peritoneal cystic lesion; however, it failed to identify the cervical myoma.

- ***Management and Outcome:***

The patient underwent exploratory laparotomy under general anesthesia. Intraoperatively, a large pedunculated cervical myoma measuring 45 × 35 cm was found impacted in the pouch of Douglas, causing bladder neck obstruction. Total abdominal hysterectomy was performed, with careful ligation of the round ligaments, utero-ovarian ligaments, uterine vessels, and uterosacral and cardinal ligaments. The myoma weighed 10 kg. Estimated blood loss was 200 mL, and hemostasis was achieved. Postoperatively, the patient's urinary symptoms resolved, and she was able to void normally.

- ***Conclusion:***

Pedunculated cervical myomas, though rare, should be considered in postmenopausal women presenting with recurrent urinary retention. Imaging studies may not reliably detect these masses, highlighting the importance of thorough pelvic examination and consideration for exploratory surgery. Total abdominal hysterectomy is an effective treatment for symptomatic large cervical myomas causing lower urinary tract obstruction.

Keywords: *Pedunculated Cervical Myoma, Post Menopause, Urinary Retention, Total Abdominal Hysterectomy, Case Report*.

How to Cite: Chrisantus Ngongi; Alfred Mwakalebela, Laison; Christopher Meshack Mzimya; Ally Jack Msonga; Frank Anthony Malika; Andrea R Modest (2025) Recurrent Urinary Retention in a Postmenopausal Woman Secondary to Pedunculated Cervical Myoma: A Case Report at Iringa Regional Referral Hospital in Tanzania. *International Journal of Innovative Science and Research Technology*, 10(12), 695-700. https://doi.org/10.38124/ijisrt/25dec142

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25dec142

I. INTRODUCTION

Recurrent urinary retention in postmenopausal women is uncommon, but it may occur secondary to obstructive pelvic pathology such as a pedunculated cervical myoma, which is particularly rare in this age group (1). Urinary retention refers to the incomplete emptying of the bladder and may result from various factors, including pelvic organ prolapse, postoperative complications, pelvic masses, constipation, neurological disorders, and the use of medications such as antidepressants, nasal decongestants, and anesthetic agents. Although uterine myomas typically regress after menopause due to reduced estrogen levels, their persistence or continued growth can be influenced by several factors, including a woman's body mass index (BMI), which may contribute to sustained hormonal activity and continued fibroid development (2)

Although cervical myomas are predominantly diagnosed in women of reproductive age, they may occasionally persist or present after menopause and can contribute to bladder outlet obstruction, leading to recurrent urinary retention, though this remains rare in postmenopausal women. Definitive management requires accurate identification of the underlying pathology, and in cases involving symptomatic cervical myomas, total hysterectomy is recommended to prevent future recurrence, as these masses may present in varied forms (3).

The roles of estrogen and progesterone naturally decline as women age, particularly after menopause. However, in some women, these hormones may continue to exert residual activity, contributing to various disease conditions that affect different body systems. This includes the persistence or growth of uterine myomas, which can lead to complications such as recurrent urinary retention in postmenopausal women, a presentation that is notably rare. The most effective treatment for such cases is often a total hysterectomy. Nevertheless, diagnostic challenges may arise, as pelvic masses such as cervical myomas can occasionally be mistaken for other conditions, including an enlarged appendix, potentially resulting in unnecessary procedures such as appendectomy (4).

The association between cervical myoma and recurrent urinary retention can be better understood by examining the underlying pathophysiological mechanisms, diagnostic challenges, and management approaches. A thorough evaluation requires careful consideration of differential diagnoses and contributing factors, as multiple pelvic and systemic conditions may present with similar symptoms and complicate clinical decision-making (5).

Despite the fact that recurrent urine retention may have multiple causes, CT scan findings alone may not always provide a reliable diagnosis. This limitation underscores the importance of multidisciplinary evaluation by both gynecologists and surgeons, particularly because certain pelvic pathologies, including malignancies, can present with similar symptoms and contribute to diagnostic uncertainty. This case therefore highlights recurrent urinary retention in a postmenopausal woman secondary to a pedunculated cervical myoma, a condition that initially led to diagnostic confusion, as the patient had been evaluated by different specialists who each had differing interpretations of her presenting complaint.

II. CASE REPORT

A 68-year-old woman, P2 L2, was admitted in October 2024 at Iringa Regional Referral Hospital from the Iringa Region in the southern highlands of Tanzania, presented with a 10-month history of incomplete bladder emptying and mentioned that she have been re-admitted several times due to inability to empty urine. And on medication history was found that treated with metal dilation (Urethral bouginage) and discharge two days late with some relief. Her symptoms began gradually and progressed from partial to persistent, recurrent urinary retention. Over the past two months, the condition worsened to complete retention, which was managed with urethral catheterization. She had no history of bladder or urethral surgery, no history of straddle or pelvic injuries, and no lower limb numbness. She also denied excessive thirst, increased fluid intake, or increased urinary frequency. However, she reported lower abdominal heaviness and recurrent constipation.

In July 2025, the patient was re-admitted with similar complaints. On abdominal examination, she was found to have a 6 cm umbilical defect and abdominal distension. She was planned for laparotomy, during which an inflamed appendix was identified, and an appendectomy was performed. She remained in the ward for two days and was discharged thereafter.

In August 2025, the patient was admitted again with the same complaint of incomplete urinary bladder emptying for three weeks. She denied dysuria, hematuria, fever, and vomiting but reported intermittent constipation. She was a known hypertensive patient on telmisartan and amlodipine with well-controlled blood pressure. She had no family history of similar conditions, no known drug allergies, and did not smoke or consume alcohol.

- *Physical and Abdominal Examination*

On examination, the patient was alert, not pale, not jaundiced, and had no lower limb edema. Her blood pressure was 140/85 mmHg, and her pulse rate was 88 beats per minute. The abdomen was not distended. A sub-umbilical midline incision scar from the laparotomy performed two months earlier was noted. There was mild suprapubic tenderness, no palpable masses, and bowel sounds were audible.

Per vaginal examination revealed a firm, smooth, non-tender mass palpable through the posterior fornix. The vaginal mucosa was smooth and intact. Speculum examination showed a normal cervix with a slight bulge of the posterior fornix, and the external cervical os appeared normal.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25dec142

➢ *Laboratory Investigations Showed:*

- Total white blood cells: 5.16 × 10⁹/L (normal)

✓ Neutrophils: 1.88 × 10⁹/L (normal)
✓ Lymphocytes: 2.88 × 10⁹/L (normal)

- Red blood cells: 4.66 × 10⁹/L (normal)
- Hemoglobin: 13.1 g/dL (normal)
- Platelets: 206 × 10⁹/L (normal)
- Blood group: O^+
- Serum creatinine: 66 mmol/L (normal)
- Alpha-fetoprotein (AFP): 4.7 ng/mL (normal)
- Carcinoembryonic antigen (CEA): 1.5 ng/mL (normal)

Abdominopelvic ultrasound revealed an adnexal mass with a large anechoic component. No intraperitoneal fluid was observed. Kidneys, the spleen, and the gallbladder appeared normal.

A CT scan of the abdomen showed a large cystic lesion in the peritoneal cavity measuring 9 × 8 cm. Additional findings included:

- Liver: Normal size and homogeneous density, no focal lesions, no intra- or extra-hepatic biliary dilation.
- Portal and hepatic veins: Normal. No enlarged lymph nodes at the porta hepatis.
- Gallbladder: Distended with normal wall thickness; no calculi or pericholecystic fluid.
- Pancreas: Normal size and morphology; no ductal dilation or calcification; preserved fat planes.
- Spleen: Normal with no focal lesions.
- Kidneys: Normal in size, site, shape, and axis; no focal lesions, calculi, or pelvicalyceal dilation.
- Adrenal glands: Normal bilaterally with no masses.
- Stomach: Normally distended with no wall thickening.
- Small and large bowel: No wall thickening or dilatation; ileocecal junction normal.
- Omentum and mesentery: Normal; no nodules or lymph node enlargement.
- Major vessels (aorta, IVC, SMA): Normal.
- Lymph nodes: No para-aortic, iliac, pelvic, or inguinal lymphadenopathy.
- Ascites/pleural effusion: None.
- Urinary bladder: Normal contour and capacity with no wall thickening or intraluminal masses.
- Uterus: Anteverted, with no myometrial mass lesions.
- Ovaries: Normal; no cysts or masses.
- Pelvic cavity: No free fluid.
- Skeleton and soft tissues: No focal lytic or sclerotic lesions; soft tissues normal

III. FINDINGS

Computed tomography (CT) of the abdomen demonstrated a peritoneal cystic lesion.

The CT scan was unable to detect a pedunculated cervical myoma. Instead, it revealed a cystic mass, which, during laparotomy, was found to be an enlarged, inflamed appendix that had been mistaken for the cystic lesion identified on imaging. Based on the findings from per vaginal examination, laboratory results, and imaging studies, the patient was counseled and provided informed consent for an exploratory laparotomy.

- Preoperative Preparation: The patient underwent standard preoperative preparation, including: Hemoglobin estimation, Establishment of an intravenous line, Urethral catheterization, Administration of preoperative medications, and Completion of a written informed consent form.

IV. INTRAOPERATIVE AND PROCEDURE

The patient was placed in a supine position under general anesthesia and prepared in a sterile manner. A sub-umbilical midline incision was made, and the abdomen was opened in layers under aseptic conditions.

➢ *Intraoperative Findings:*

- No peritoneal mass was identified.
- The uterus was normal in its anatomical position.
- Upon exteriorization of the uterus, a large pedunculated cervical myoma was found impacted in the pouch of Douglas, causing bladder neck obstruction. The myoma measured approximately 45 × 35 cm.

➢ *Surgical Procedure:*

- The round ligaments were identified, clamped, cut, and ligated bilaterally.
- The utero-ovarian ligaments were clamped, cut, and ligated bilaterally using Vicryl No. 1.
- The vesicouterine fold was bluntly dissected downward, and the uterine vessels were identified at the level of the internal os, then clamped, cut, and ligated bilaterally.
- The uterosacral and cardinal ligaments were clamped, cut, and ligated bilaterally with Vicryl No. 1.
- The cervix was circumferentially delineated, entering the vagina, and the uterus was removed.
- The vaginal cuff was repaired in a continuous fashion using Vicryl No. 1, incorporating the uterosacral ligaments for support.
- The broad ligaments, infundobulopelvic pedicles, and vaginal cuff were inspected for hemostasis.

➢ *Outcome:*

- Estimated blood loss: 200 mL
- The excised myoma weighed 10 kg
- The abdominal wall was closed in layers up to the skin

➢ *Postoperative Note:*

The findings confirmed that the patient's lower urinary tract symptoms were caused by the large cervical myoma.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25dec142

Although she had previously undergone an appendectomy, her urinary symptoms persisted. Following the total abdominal hysterectomy, the patient is now passing urine normally.

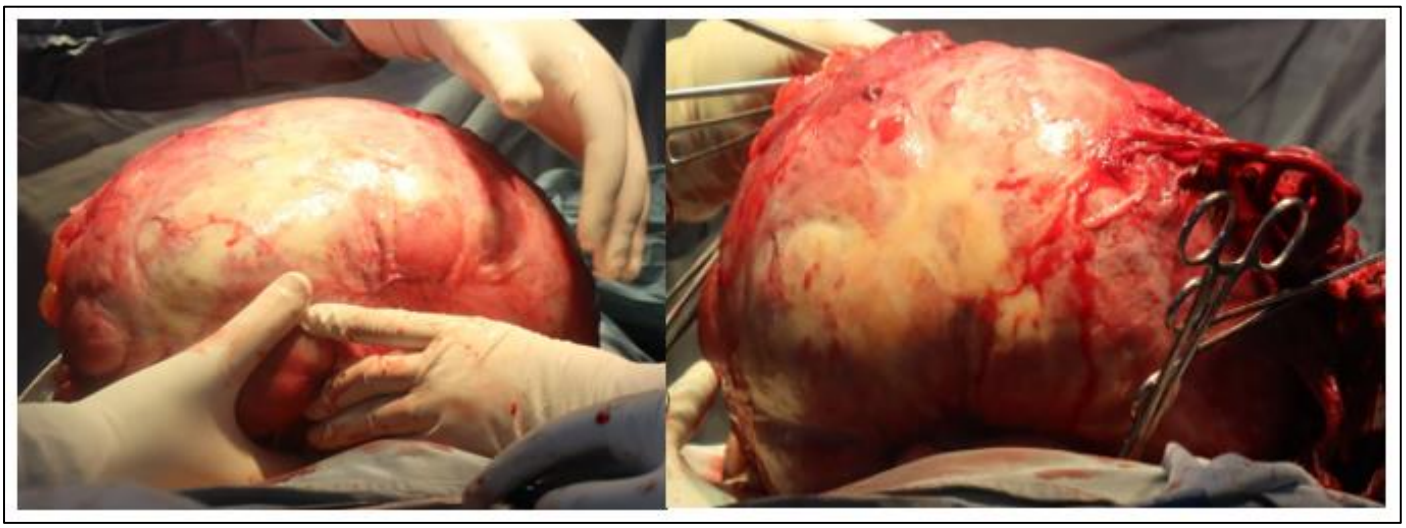

Fig 1 Image of 10kg Myoma Removed During Total Hysterectomy

V. DISCUSSION

This case describes a 68-year-old woman with long-standing urinary retention caused by a pedunculated cervical leiomyoma. She was initially evaluated in the surgical and urology departments, undergoing bouginage and exploratory laparotomy, but her symptoms persisted. Referral to gynecology revealed the cervical myoma impacting the posterior fornix, and she underwent a total abdominal hysterectomy. This highlights the diagnostic and management challenges of cervical leiomyomas, which are a rare cause of urinary retention, particularly in postmenopausal women.

The approach to managing urinary retention varies based on the patient's initial presentation, the definitive treatment plan, and whether care is provided by a urologist or a gynecologist. Urologists typically favor a conservative strategy, often involving extended medical management before surgery. Conversely, gynecologists are more likely to prioritize surgical intervention, especially when the retention is associated with uterine or pelvic pathology (6,7)

Uterine myomas are common benign tumors affecting up to 70% of women of reproductive age. They are hormone-sensitive, rare before menarche, and usually regress after menopause, though persistent tumors can lead to complications such as urinary retention (8). Despite being in postmenopause period our patient her leiomyoma did not regress.

Uterine myoma (leiomyoma) are non-cancerous tumor progress from smooth muscle cells of uterine wall represent common gynecologic condition affecting significant percentage of women in their reproductive age (9). Although the precise etiology of uterine leiomyomas is not fully understood, their prevalence rises markedly with advancing age. By the age of 50, an estimated 70–80% of women develop these tumors. The incidence is highest among African American women compared to their Caucasian counterparts, and nulliparous women are also noted to have an increased risk (10).

Approximately 70% of leiomyomas are asymptomatic, whereas about 30% of cases present with clinical symptoms. In symptomatic patients, common manifestations include irregular menstrual bleeding, infertility, pressure-related complaints such as back pain, increased urinary frequency, constipation, and abdominal distension (6,11). The patient presented with long-standing urinary retention, which had persisted over an extended period prior to evaluation.

Although leiomyomas are traditionally linked to women's reproductive health, there is limited research recognizing their important but often overlooked role in causing lower urinary tract symptoms, which can result in urinary retention (9). Urinary retention in patients with leiomyomas is largely influenced by the tumor's anatomical location. Posteriorly situated leiomyomas may compress the urethra or bladder neck against the pubic bone, causing voiding difficulties. Cervical leiomyomas leading to urinary retention are rare, and there is limited published literature on this condition. In this case report, the patient presented with a cervical leiomyoma during the postmenopausal period, highlighting an uncommon presentation that contributed to her recurrent urinary retention (7).

Cervical leiomyomas are a rare subset of benign uterine tumors and are typically asymptomatic. In a study by Tiltman examining 661 uteri removed for leiomyomas, only 0.6% were located in the cervix, with most tumors arising from the uterine corpus (7). According to Takeuchi cervical leiomyoma can occur as extra cervical or intracevical they present with dysmenorrhea, menorrhagia, constipation and urinary frequency (12). In contrast with presented patient had pedunculated cervical leiomyoma with none of the symptoms mentioned above

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25dec142

Obstructive urinary retention in women is rare without a history of prior surgery, though it can occur during pregnancy, typically as acute retention. This is most often caused by a retroverted uterus, which displaces the cervix and compresses the lower bladder, impeding urine flow through the urethra (13). In the present patient was presenting with gradual onset of incomplete urine voiding later progressing to urine retention.

The location of the leiomyoma and the duration of symptoms can affect the speed of diagnosis and treatment. Yazdany et al. reported that patients initially evaluated in departments such as surgery or urology experienced an average delay of 14 months from diagnosis to surgery, compared to just 2.1 months for those presenting directly to gynecology (14). Similarly in our case, patient presented to surgical department had delay for about 9 months from diagnosis to surgery, whereas this diagnosis to surgical intervention delay was about 2month presenting to gynecology department

Various treatment options exist to manage leiomyoma growth, including progestin analogues, cervical pessaries, gonadotropin-releasing hormone (GnRH) agonists, and uterine artery embolization (UAE). In our setting, UAE was unavailable, and given the large size of the myoma, surgical intervention was chosen. Surgery remains the primary treatment for cervical leiomyomas, particularly in cases with chronic pelvic pain, abnormal bleeding, or urinary retention. Total abdominal hysterectomy is often recommended, performed in a stepwise manner with adrenaline infiltration and ligation of the hypogastric vessels to reduce intraoperative bleeding (7) (15) this is contrary to our case straight forward total abdominal hysterectomy was done.

VI. CONCLUSION

Generally, case highlights that pedunculated cervical myomas, though uncommon in postmenopausal women, can existing as recurrent urinary retention and might be misdiagnosed on imaging studies, leading to late or inappropriate interventions. Detailed clinical evaluation, comprising detailed pelvic examination, remains crucial in patients with persistent lower urinary tract symptoms. Total abdominal hysterectomy is an effective and definitive treatment for large cervical myomas causing bladder outlet obstruction. Clinicians should maintain a high index of doubt for cervical myomas in postmenopausal women presenting with unexplained urinary retention, and early referral for gynecologic assessment and timely surgical management is recommended to prevent complications and restore normal urinary function.

- *Data Availability*

All data supporting the conclusions of this report are included within the manuscript. Additional patient information not relevant to this case is protected in accordance with privacy regulations.

- *Consent*

The patient provided written informed consent for the publication of her clinical information.

- *Funding*

No financial support was received for this case report.

- *Conflict of Interest*

The authors report no conflicts of interest.

REFERENCES

[1]. Garg P, Bansal R. Neglected case of a huge leiomyoma in an elderly postmenopausal woman : a case report. J Med Case Rep [Internet]. 2022;1–4. Available from: https://doi.org/10.1186/s13256-022-03705-z

[2]. Oue K, Ichimura T, Murakami M, Matsuda M, Kawamura N. Postmenopausal Shrinkage of Uterine Myomas : A Retrospective Study of 97 Cases Monitored Annually for 10 Years. 2024;16(10):1–11.

[3]. Nowak M, Bartosik W, Witana W, Nowak K, Wilkusz J. Rapidly growing uterine myoma – should we be afraid of it ? 2023;22(3):161–4.

[4]. Shigeta H, Asano R, Oi Y, Katayama K, Ishidera Y. Gynecology & Reproductive Health Uterine Leiomyoma in Postmenopausal Women : Possible Reasons for Growth and Differential Diagnosis. 2021;5(6):1–8.

[5]. Sweta SinGh1, SaubhaGya Kumar Jena2 , mOnaliSha naiK3 , lipSa ray4 S behera5. Uterine Fibroid (Leiomyoma) with Acute Urinary Retention : A Case Series. 2016;10(4):10–2.

[6]. Ucla H, We R. URINARY RETENTION AND VOIDING DYSFUNCTION IN WOMEN WITH UTERINE. 2009;1–2.

[7]. Pol G, Ci P, Specjalistyczny S, Ni K, Wydzia P, Uniwersytet Z. Ostre zatrzymanie odpływu moczu spowodowane mięśniakiem szyjki macicy – opis przypadku i przegląd literatury Acute urinary retention due to cervical myoma. 2015;(1):77–9.

[8]. Giuliani E, Erica SA sanie. Epidemiology and management of uterine fibroids. 2020;(September 2019):3–9.

[9]. Tan L hong, Tsai L hsien. Lower Urinary Tract Symptoms in Uterine Myoma : A Systematic Review and Meta-Analysis. 2025;1–16.

[10]. Dagur G, Suh Y, Warren K, Singh N, Fitzgerald J, Khan SA. Urological complications of uterine leiomyoma : a review of literature Urological complications of uterine leiomyoma : a review of literature. Int Urol Nephrol. 2016;(October 2017).

[11]. Ekin M, Cengiz H, Öztürk E. Genitourinary symptoms and their effects on quality of life in women with uterine myomas. 2014;807–10.

[12]. Takeuchi H, Kitade M, Kikuchi I, Shimanuki H, Kumakiri J, Kobayashi Y, et al. A new enucleation method for cervical myoma via laparoscopy. J Minim Invasive Gynecol. 2006;13(4):334–6.

[13]. Brahmantara BN, Harjoto BS, Setiawan WA, Kristie G, Santoso MI, Yogi IK, et al. Acute Urinary

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25dec142

Retention in Early Pregnancy : A Case Report. 2022;4(5):35–7.
[14]. Yazdany T, Bhatia NN, Nguyen JN. Urinary retention and voiding dysfunction in women with uterine leiomyoma: a case series. J Reprod Med. 2012;57(9–10):384–9.
[15]. Dahiya S, Dahiya P, Saini K, Dahiya K. Cervical fibroid : A diagnostic dilemma and operative challenge – one year study. 2024;11(3):409–14.