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When a Massive Distension of Bladder Masquerades as an Ovarian Tumor: Chronic Urinary Retention Revealing a Cervical Leiomyoma

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Abstract: ***Massive urinary bladder distension presenting as an adnexal mass is uncommon and may lead to diagnostic confusion. We reported a rare case of a 33-year-old unmarried female who presented with progressive abdominal distension, constipation and lower urinary symptoms for two months. Clinical examination revealed a large abdominopelvic mass suggestive of an ovarian pathology. Ultrasonography demonstrated a large cystic abdominopelvic lesion, raising suspicion of an ovarian tumour. However, contrast-enhanced CT revealed gross urinary bladder distension extending into the upper abdomen, a posterior cervical fibroid causing bladder outlet obstruction, and a concomitant ovarian endometriotic cyst. Following gradual bladder decompression with urethral catheterization, approximately 3000 mL of urine was drained. The patient subsequently underwent laparoscopic myomectomy and right ovarian cystectomy. This case highlights the importance of considering urinary retention in the differential diagnosis of large pelvic cystic masses and emphasizes the role of cross-sectional imaging in establishing the diagnosis.***

Keywords: Urinary Bladder Distension; Cervical Fibroid; Urinary Retention; Pelvic Mass

1. Introduction

Abdomino-pelvic masses are a common finding in gynecological practice and are commonly due to ovarian or uterine pathology. (1) However distended bladder may occasionally mimic adnexal masses, resulting in diagnostic uncertainty. (2,3) Chronic urinary retention secondary to cervical fibroids is rare in reproductive-age women and may present with non-specific symptoms such as abdominal distension, constipation and pelvic discomfort. This case emphasizes the importance of comprehensive diagnostic workup to avoid unnecessary interventions and facilitate the appropriate management.

2. Case

A 33-year-old unmarried female presented with a progressive abdominal distension, constipation and lower urinary tract symptoms for 2 months. The patient had no history of abnormal menstrual bleeding, fever, weight loss or loss of appetite. There was no past significant medical or surgical history.

On clinical examination, patient had pallor with a large abdominopelvic mass of around 34-36 weeks gravid uterus, cystic in consistency with restricted mobility and regular borders. No ascites was detected.

Laboratory findings on admission revealed a hemoglobin of 8.2 gm/dl. Tumour markers were within normal limits. Pelvic ultrasonography demonstrated a large anechoic cystic lesion measuring 18 × 16 × 23 cm located anterior to the uterus, ?Large ovarian cyst, with an additional cystic lesion measuring 9 × 4.7 cm in the pouch of Douglas, suggestive of an endometrioma.

With the clinical differentials of Giant ovarian cyst, Endometriotic cyst, distended urinary bladder secondary to chronic urinary retention, Broad ligament cyst, Mesenteric cyst and discrepancy between clinical and sonographic findings, contrast-enhanced CT of the abdomen and pelvis was performed. CT demonstrated (Fig.1 & Fig.2 A, B) gross distension of the urinary bladder measuring approximately 15 × 18.9 × 25.3 cm extending into the upper abdomen. A heterogeneously enhancing posterior cervical fibroid measuring 7.3 × 6.2 × 4.7 cm was identified compressing the rectum and likely contributing to bladder outlet obstruction. A separate thin-walled cystic lesion posterior to the uterus measuring 6.9 × 9.9 × 7.4 cm was consistent with an ovarian endometriotic cyst.

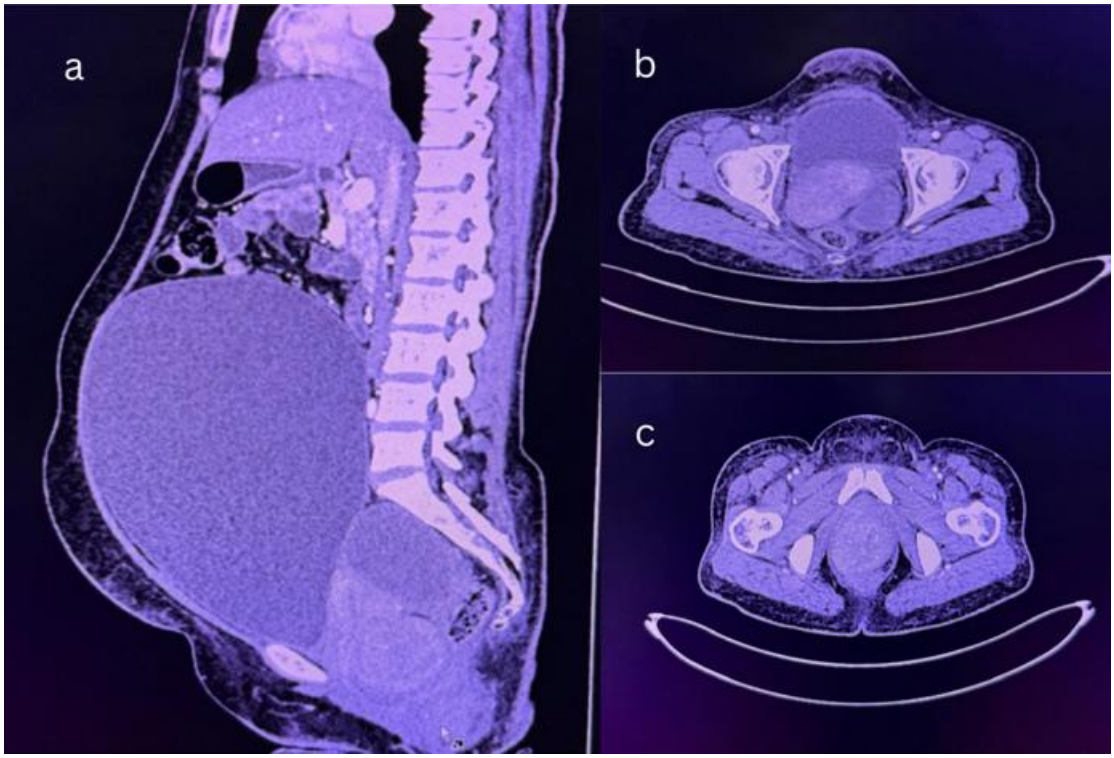

Figure 1(a): Mid-Saggital contrast enhancing computed tomography of the pelvis and abdomen demonstrating a grossly distended urinary bladder. Superiorly it is displacing jejunal and ileal loops. A heterogeneously enhancing isodense lesion arising from posterior wall of cervix s/o fibroid. A homogenously hypodense non-enhancing cystic lesion posterior to bladder s/o endometriotic syst. **(b):** Axial contrast enhanced computed tomography of the pelvis demonstrating a heterogeneously enhancing isodense lesion arising from posterior wall of cervix s/o fibroid compressing rectum posteriorly and urethra anteriorly. **(c):** Axial contrast enhanced computed tomography of the pelvis demonstrating a heterogeneously enhancing isodense lesion arising from posterior wall of cervix s/o fibroid compressing rectum posteriorly and abutting bladder anteriorly

The patient underwent gradual bladder decompression through urethral catheterization. Approximately 3000 mL of urine was drained in stages to reduce the risk of decompression injury.

Subsequently, laparoscopic surgery was performed. Intraoperatively (Fig.3) bladder appeared flaccid and redundant, consistent with chronic overdistension. An 8 × 7 cm posterior cervical fibroid was identified compressing the bladder outlet. A large right ovarian endometriotic cyst measuring approximately 13 × 12 cm with dense adhesions to adjacent structures was also present. Laparoscopic myomectomy and right ovarian cystectomy was performed.

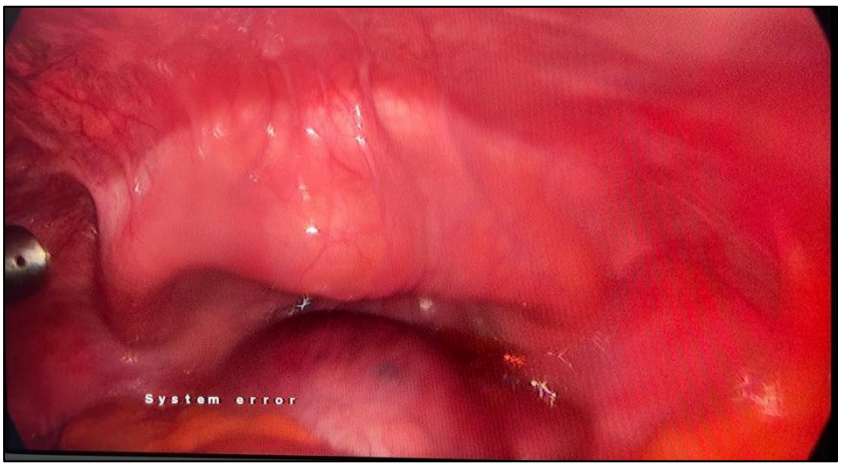

Figure 2: Laparoscopic view demonstrating a grossly distended and hypertrophied urinary bladder with flaccid bladder wall initially masquerading as an ovarian mass. The bladder distension was secondary to chronic longstanding urinary retention caused by a posterior wall cervical subserosal fibroid.

The postoperative period was uneventful, following surgery and she went discharge on day 3 with catheterization. Following catheter removal on postoperative day 8, the patient developed persistent high post-void residual urine

volumes exceeding 500 mL and post-micturition dribbling. Urological evaluation was sought. Cystoscopy revealed loss of bladder trabeculations due to chronic bladder overdistension. Urethral dilatation was performed and a urinary catheter was kept for 21 days. The patient showed gradual improvement in bladder function during follow-up.

3. Discussion

Urinary retention caused by cervical fibroids is uncommon but may result from mechanical compression of the bladder neck or proximal urethra. (4,5) Chronic retention can lead to progressive bladder enlargement and may mimic a large ovarian cyst on clinical examination and ultrasonography.

This case illustrates several diagnostic challenges. First, the absence of significant urinary symptoms initially diverted attention towards an ovarian pathology. Second, ultrasonography alone was insufficient to distinguish the distended bladder from a large cystic pelvic mass. Cross-sectional imaging with CT was crucial in establishing the diagnosis and identifying the underlying cervical fibroid. (6)

Recognition of urinary retention as a potential cause of a pelvic mass is essential, particularly in women with large fibroids, constipation or voiding symptoms. Early catheterisation and assessment of post-void residual volume can assist in diagnosis and prevent long-term bladder dysfunction.

4. Conclusion

This case underscores the importance of considering a broad differential diagnosis when encountering pelvic masses. Enlarged bladder due to urinary retention is a rare but important consideration, especially in patients presenting with gross abdominal distension. Early recognition can prevent unnecessary interventions and reduce the risk of long-term bladder dysfunction.

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