

Functional medicine

Robotic myomectomy for a non-pregnant reproductive age woman with severe acute urinary retention: A case report

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ABSTRACT

Urinary retention in non-pregnant reproductive age women is a very rare condition. Hereby, we reported a rare case of acute urinary retention in a non-pregnant reproductive-age woman with hydronephrosis and hydroureter due to a large fibroid. The fibroid had resulted in constant pressure to the urethral sphincter, which causes urinary retention. Robotic myomectomy was performed after insertion of ureteric catheters. To our knowledge, this is the first case report of a robotic surgery being utilised to manage acute urinary retention in a non-pregnant individual due to large fibroid.

Introduction

Urinary retention is more common in men than in women. Approximately 7:100.000 women experienced acute urinary retention per year and 50% of those were estimated to occur during the reproductive age.¹ Acute urinary retention in female were mostly associated with the presence of benign or malignant tumour in the pelvis. Fibroid is one of the most common female benign tumour in reproductive age and a common cause of bladder neck compression particularly in pregnancy. Its constant pressure may lead to bladder dysfunction. Fibroids vary in size, and location within the uterine body. Several factors including ethnicity, nulliparity, and age have been identified as risk factors which influence tumour development.²

Robot-assisted laparoscopic myomectomy surgery has been accepted as a surgical approach in the management of large fibroids.³ Robotic surgery has advantages over abdominal approach with lesser blood loss, shorter length of hospital stay, and faster recovery.⁴ Robotic instruments' robust capability in removing incarcerated fibroid is evident. We report a rare case of acute urinary retention caused by a large fibroid mass. To our knowledge, this is the first case report of a robotic surgery to manage acute urinary retention in a non pregnant female.

Case presentation

A 38-year-old, parity one woman presented to the Emergency Room with a sudden onset of acute lower abdominal pain. Foley catheter no 14 was inserted and 1 L of urine was drained. She had had symptoms of urinary urgency and frequency as well as constant pressure in the lower abdomen in the past one month.

CT scan revealed a large 10 cm posterior solitary uterine fibroid which pushed the bladder anteriorly. Both ureters and pelvic-calices system were moderately dilated (Fig. 1a and b). The kidneys were in normal size. With fluoroscopy-guided cystography, ureteric catheter was inserted. Bladder cavity was evaluated and no abnormality seen. A large solitary intramural fibroid in the posterior of uterine corpus was incarcerated in the Pouch of Douglas. (Fig. 2). Robotic myomectomy was performed using Davinci® SI 3 arms robotic system. The uterus was sutured with 0-V-Loc (Medtronic-USA) in multiple layers. The catheter was removed the following day and the patient was discharged with no urinary complications.

Discussion

In non-pregnant women, fibroid is the most common cause of bladder neck compression. There is very small limited of case report

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Fig. 1a. Posterior Intramural Fibroid.

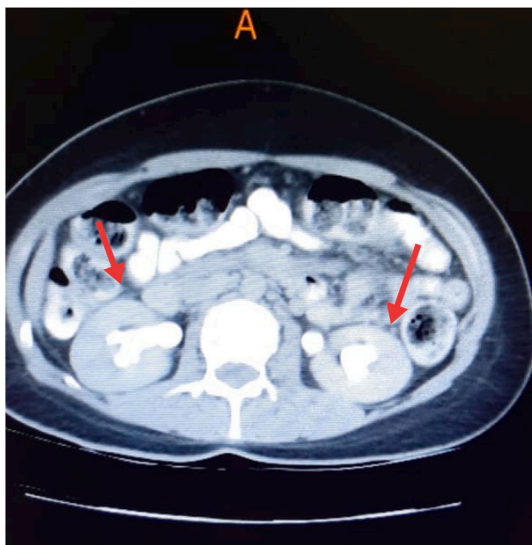


Fig. 1b. Posterior Fibroid with hydroureter and hydronephrosis.

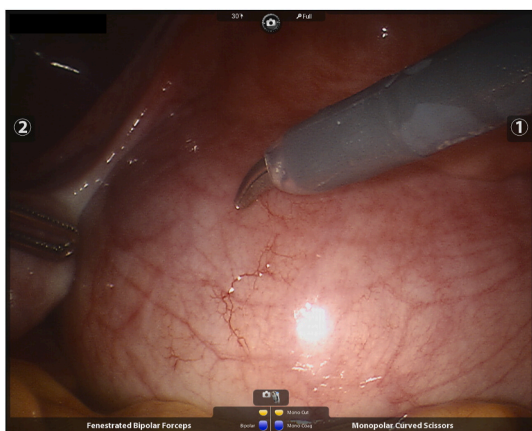


Fig. 2. Posterior Fibroid incarcerated in Pouch of Douglas.

pertaining this issue in literatures to date. Fibroid may be located in various uterine body to cause urinary retention. The pathophysiology is related to the mechanical compression of proximal urethra by the incarcerated fibroid and urethral elongation, resulting in intermittent voiding dysfunction.⁵

The CT scan showed significant hydronephrosis and hydroureters to indicate the severity of the obstruction. As the bladder cavity was normal, we hypothesized that this patient had an ongoing bladder dysfunction due to bladder neck compression and thus resulted in acute inability to void, which lead to urinary retention. Meticulous tissue handling of pelvic side wall in this case was important to avoid injury to ureter. Robotic instruments are very strong to remove such incarcerated fibroid. The system also has high maneuverability with its flexible and articulating instruments. Therefore, robotic surgery should be counselled as an option that will assist the surgeon in good tissue handling which can be difficult in large fibroids.

Conclusion

Urinary retention due to large fibroid in non-pregnant women is uncommon. Robotic myomectomy is shown to be an effective treatment option in acute situation.

Consent for publication

Written consent was obtained from the patient.

Ethical approval

Waiver of ethic approval was obtained from ethics committee of Faculty of Medicine, University of Indonesia on March 23, 2020 (ID number of communication: ND-337/UN2.F1/ETIK/PPM.002/2020).

Author contributions

The study was designed and conceived by IS. IS, PB, KH, BDI were responsible for surgery and images interpretation. IS, NH, PB, BDI and KH drafted the manuscript. All authors performed study literature, manuscript writing, editing, and approved the final version of the manuscript.

Availability of data and material

Not applicable due to none of dataset was created to this study.

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None.

Declaration of competing interest

The authors declared that they have no conflict of interest.

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