

A Cause of Recurrent Urinary Retention in Pregnancy; Retroverted Uterus: Case Report

Gebelikte Tekrarlayan Üriner Retansiyon Nedeni; Retrovert Uterus: Olgu Sunumu

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Abstract

Acute urinary retention is one of the most common situations encountered in urological emergencies. It is more frequently seen in older men. Acute urinary retention in pregnant women is a rare condition but it may cause abortus, preterm labor and rarely uterine ischemia. It is very difficult to reveal the causes of acute urinary retention in pregnant women. One of them is acute urinary retention due to retroverted uterus which is observed in 11% of pregnant women. In this case, we discussed a young pregnant patient who presented to our outpatient clinic with complaints of recurrent urinary retention due to retroverted uterus.

Keywords: urinary retention, pregnancy, retroverted uterus

Öz

Akut üriner retansiyon ürolojik aciller içerisinde en sık karşılaşılan durumlardan biridir. Daha sık olarak ileri yaş erkeklerde görülür. Gebelerde ortaya çıkan akut üriner retansiyon ise çok daha nadir karşılaşılan bir durum olsa da, abortus, erken doğum ve nadir olarak uterin iskemi gibi komplikasyonlar ortaya çıkarabilmesi açısından önemlidir. Gebelerde ortaya çıkan akut üriner retansiyonun nedenlerini ortaya koymak oldukça güçtür. Bunlardan bir tanesi de gebelerde %11 oranında gözlenen retrovert uterusu bağlı gelişen akut üriner retansiyondur. Biz de bu olguda retrovert uterus nedeniyle ortaya çıkan tekrarlayan üriner retansiyon şikayetleri ile polikliniğimize başvuran genç gebe bir hastayı tartıştık.

Anahtar Kelimeler: üriner retansiyon, gebelik, retrovert uterus

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Introduction

Urinary retention can be described as an inability to urinate, which occurs due to any cause that needs urgent intervention. It is often seen as a result of obstruction due to benign prostatic hyperplasia and urethral stenosis, especially in adult men. Urinary retention is more rare in women and can potentially occur due to anatomical, pharmacological, neurological, infective, myopathic and psychogenic etiologies [1].

A rare cause of urinary retention is the retroverted uterus, which mechanically obstructs the bladder during pregnancy. Retroverted uterus occurs in approximately 11% of first trimester pregnancies, of which only 1% have urinary retention that requires treatment [2]. Urinary retention in pregnant women is important to prevent complications by revealing the underlying causes.

Case Presentation

A pregnant woman at her 13th gestational week with gravida 2, parity 1 at the age of 28 was admitted to the urology outpatient clinic with abdominal pain and inability to urinate. The patient's complaints of difficult urination continued intermittently for about 1 week and she was admitted to emergency department due to the development of vesical globe. Urethral catheter was inserted several times. Patient's medical history did not reveal any known neurological or urological condition. The patient's first pregnancy was also associated with similar complaints and the patient told that urethral catheterization had been performed previously.

The physical examination showed that the abdomen had a natural appearance. Abdominal palpation was partially painful, and there was no sign of abdominal defense or rebound. Suprapubic pain and a feeling of fullness were present. Urinary ultrasonography (USG) showed grade 2 hydronephrosis in both kidneys and vesical globe (**Figure 1**). The patient underwent urethral catheterization and the bladder was emptied intermittently. Leukocytes (+) were found in microscopic



Figure 1. Retroverted uterus with image of vesical globe and 13-week-old fetus

analysis of urine samples. Blood urea and creatinine values were 62 mg/dl and 1.4 mg/dl, respectively. Results of other biochemical tests were within normal limits. There was no bacterial reproduction in urine culture. A retroverted uterus and a 13-week-old fetus were observed in the patient's pelvic USG.

Other anatomical structures were natural. The patient's urethral catheter was removed, but due to the development of urinary retention again, urethral catheterization was applied. The patient was advised to undergo urodynamic tests but the patient refused. The general evaluation of the patient showed no pathology other than retroverted uterus.

The same complaints in the first trimester of her first pregnancy and the disappearance of the symptoms completely with the termination of pregnancy and the occurrence of urinary retention during the second pregnancy starting from the 13th gestational week were evaluated as urinary retention caused by the retroverted uterus. The patient underwent clean intermittent catheterization training 6 times a day and the urethral catheter was removed. Grade 1 hydronephrosis in the right kidney and natural left kidney were evaluated. It was decided that minimal pelvicalyceal ectasia in the right kidney was thought to be related to pregnancy. The creatinine value of the patient was 0.9 mg / dl. Her urine culture was sterile. She had a normal vaginal birth at the 38th gestational week and the need for clean intermittent catheterization was completely eliminated within 2 months after delivery. There was no pathological finding in urodynamic tests performed at postpartum 3rd month.

Discussion

Urinary retention can occur due to anatomical, pharmacological, neurological, infective, myopathic and psychogenic etiologies [1]. Acute and/or recurrent urinary retention in pregnant women without previous lower urinary tract symptoms; may occur due to ovarian masses that cause external compression to the urethra, leiomyoma, uterine prolapse, retroverted uterus, abdominal pregnancies and Fowler syndrome [3].

Retroverted uterus can cause urinary retention. Anterosuperior displacement of uterus caused by mechanical pressure pushes the uterus towards the bladder neck and under the bladder [4]. Retroverted uterus is seen in approximately 11% of first trimester pregnancies and almost entire uterine fundus enters into abdomen at the end of 3rd month without causing lower urinary tract symptoms. Very rarely it causes urinary retention only in 1.4% of pregnant women with retroverted uterus which most frequently occurs between 10 and 16 weeks of gestation [5]. Our case was a 28-year-old patient with retroverted uterus who presented to our outpatient clinic due to recurrent urinary retention developed at 13th gestational week and had no pathology to explain urinary retention. The utility of urodynamic studies in these patients has not been demonstrated [2]. If left untreated, urinary retention may become permanent and cause complications such as spontaneous or septic abortion, uterine rupture, bladder rupture, chronic neuromuscular dysfunction, and even maternal death [6]. Therefore, detailed physical examination and pelvic ultrasonography should be performed after the patient's urinary retention has been removed. Our patient was recommended to perform clean intermittent catheterization during pregnancy and no complications were encountered during the controls. Although we described the

retroverted uterus that causes urinary retention in our case, high post-mictional residual volumes have been shown in the literature without urinary retention [7]. In cases of incarcerated retroverted uterus, the position of the uterus may be changed from posterior to anterior direction during vaginal examination performed with the patient in the knee- elbow or dorsal lithotomy position. However, during this maneuver, fetal and maternal complications may occur as placenta separation, rupture, etc. [5]. In the literature, Sacco et al. reported a pregnant woman treated with urethral catheterization, manual reduction and antibiotherapy for urinary retention due to retroverted uterus [2]. In this case, which may be encountered although rarely; continuous urethral catheterization, clean intermittent catheterization, and suprapubic catheterization can be used to reduce bladder compression. However, especially complications should be avoided in pregnant women caused by suprapubic catheterization [6].

Urinary retention is a urological emergency and should be treated priorily. Although urinary retention in pregnant women is very rarely caused by retroverted uterus, it is an important entity in terms complications it leads to such as uterine ischemia, abortion, uterine rupture. It should be considered that retroverted uterus may cause this condition together with other pathological conditions especially in the first trimester in pregnant women presenting with urinary retention. Patients may receive continuous and/or clean intermittent catheterization. In addition, the patient should be informed that this condition may recur in later pregnancies.

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References

- [1] Smith C, Kraus S, Nickell K, Boone T. Urinary retention in the young female. *AUA Updat Ser* 1999;18:145–52.
- [2] Danis RB, Brannon RK, Pereira N. Acute urinary retention due to a nonincarcerated retroverted gravid uterus. *Int Urogynecol J Pelvic Floor Dysfunct* 2014;26:453–4. <https://doi.org/10.1007/s00192-014-2547-y>.
- [3] Fralick R, Appell R, Nitti V. Urodynamics in pelvic prolapsed. In: Nitti V, editor. *Pract. Urodynamics*, Philadelphia, PA: WB Saunders; 1998, p. 211–8.
- [4] Yohannes P. Ultrasound in acute urinary retention and retroverted gravid uterus. *Ultrasound Obstet Gynecol* 2004;23:427. <https://doi.org/10.1002/uog.1071>.
- [5] Vikram P, Ritesh V, Nerli R, Alur S, Hiremath M. Acute Urinary Retention in Pregnancy. *Rec Res Sci Tech* 2010;2:53–4.
- [6] Chauleur C, Vulliez L, Seffert P. Acute urine retention in early pregnancy resulting from fibroid incarceration: proposition for management. *Fertil Steril* 2008;90:1198.e7-1198.e10. <https://doi.org/10.1016/j.fertnstert.2007.10.008>.
- [7] Newell SD, Crofts JF, Grant SR. The incarcerated gravid uterus: Complications and lessons learned. *Obstet Gynecol* 2014;123:423–7. <https://doi.org/10.1097/AOG.000000000000102>.