

# Can Retrovert Uterus Be a Cause of Recurrent Temporal Acute Urinary Retention During Pregnancy?

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## ABSTRACT

Urinary retention developing in early period of pregnancy is a rare but urgent condition. A few literatures were encountered on this issue. Retrovert uterus, endometriosis, pelvic inflammatory event-related adhesions, ectopic pregnancy and intramural myomas are among predisposing factors. These factors cause sticking of uterus in pelvic cavity by hindering elevation of uterus in the abdomen and acute urinary retention may develop as the result of pressure to urinary bladder floor and urethra. The case who developed the urinary retention in her three sequential pregnancies has been discussed in the light of the literature in this paper.

**Key words:** Urinary retention, pregnancy, pelvic cavity

## Retrovert Uterus Gebelik Esnasında Tekrarlayan Akut İdrar Retansiyon Sebebi Olabilirmi

### ÖZET

Gebeliğin erken döneminde gelişen idrar retansiyonu, nadir olarak izlenen ancak acil yaklaşım gerektiren bir durumdur. Bu konuda az sayıda literatüre rastlanmıştır. Predispozan sebepler arasında retrovert uterus, endometriozis, pelvik inflamatuvar olaylara bağlı gelişen adezyonlar, ektopik gebelik ve intramural myomlar yer almaktadır. Bu faktörler; uterusun batin içerisinde yükselmesini engelleyerek, uterusun pelvik kavitede hapsolmesine neden olmakta ve mesane tabanı ile üretraya bası sonucunda da akut idrar retansiyonu gelişebilmektedir. Bu makalede, birbirini takip eden her üç gebeliğinde de üriner retansiyon gelişen olgu literatür eşliğinde tartışılmıştır.

**Anahtar kelimeler:** İdrar retansiyonu, gebelik, pelvik kavite

## INTRODUCTION

Acute urinary retention (AUR) is rarely seen during pregnancy. Its mechanism of action has not been fully understood but it is an urgent condition. Many anatomic and physiologic alterations including dilations of ureters, increase in urinary bladder capacity and reduction in urinary bladder tonus develop in urinary system during pregnancy. Enlarged uterus causes urinary bladder to stuck toward anterior and upward (1). Movement of elevated uterus toward abdomen may be limited by causes like retrovert uterus, previous pelvic infections and

endometriosis-related adhesions, myomas, periurethral abscesses, urethral diverticulum, incarceration of pelvic uterus, ectopic pregnancy, vulvar edema. In this case, uterus stucked in pelvis may lead to difficulty of micturation (urination or micturition) and sometimes urinary retention by pressuring bladder neck and urethra between sacrum and pubic bones (2,3). In this paper, a 35-year old woman who experienced acute urinary retention at the end of the first trimester in her previous two pregnancies and applied with acute urinary retention again on the 14th week of gestation is presented. As recurrent

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urinary retention in the early weeks of gestation was not encountered when we reviewed English literature, this case is discussed in the light of the literature.

### CASE

A 35-year-old, gravida 3, parity 2 patient was admitted to emergency room with complaints of abdominal pain, severe back pain and failure to micturate for 14 hours. On her first examination performed by an urologist after bladder was found to be extremely distended, it was learned that the patient had polyuria and dysuria for a couple of days. On her obstetric history, she was learned to undergo two caesarean sections and developed acute urinary retention on the same weeks in her previous pregnancies. On her physical examination, her vital findings were normal however a suprapubic mass and pain were detected on abdominal examination. On her obstetric ultrasonography, single alive fetus whose crown-rump length was consistent with 14 weeks, retrovert uterus and extremely enlarged bladder were observed. A total of 1300 cc urine was emptied (emptied) from the bladder via an urinary catheter. Infection was not present on her urinary examination. In the patient who also examined by gynecology and obstetric specialists, no other pathologies concerning pelvic organs could be found except retrovert uterus. No neurologic pathologies were detected in the patient. Thus the patient was decided to be monitored with insertion of an urethral catheter. The patient who was seen to be able to micturate spontaneously after removal of catheter 10 days later was decided to be followed up. Amount of residual urine was measured as 40 cc on following days and the patient who did not develop urinary retention on her follow up underwent caesarean section on the 39th week.

### DISCUSSION

AUR in pregnancy is a rare but an urgent condition irritating the patient. Very few cases have been reported about urinary retention developing in early period of pregnancy. Although pathogenesis of AUR has not been fully explained, the most elaborated mechanism is sticking of uterus in pelvis as the result of incarcerated myomas, retrovert uterus limiting natural movement of uterus and adhesions due to various inflammatory causes. As the result of this, cervix makes pressure on neck and base of bladder and pushes bladder toward anterior thus mic-

turation (micturition) may be hindered. Filling of bladder may also be hindered as a result of sticking of bladder and irritation findings like polyuria and dysuria may develop related to this. Sticking of retrovert uterus is not permanent and improves with normally elevation of uterus after a while. Although retrovert uterus is detected in the ratio of 11% during pregnancy, urinary retention develops only in 1% of these cases. Benefit of urodynamic evaluations has not been shown in the assessment of these patients (5,6). Yang and Huang reported that factors leading to retention caused it by affecting pressure rate providing micturition (micturition). Some measures like fluid restriction and micturition (micturition) before going to bed, leaning forward in sitting position before beginning micturition (micturition) (Crede maneuver, getting to prone position from supine position before getting out of the bed and avoiding valsalva maneuver as possible have been introduced in order to prevent AUR as it usually develops at night and early in the morning (7). Love and Howell recommended a careful pelvic examination in order to determine retrovert uterus or anterior myoma in pregnant women applying with urinary complaints and also recommended aforementioned measures to these patients (7). Acute urinary retention is one of the urgent conditions in pregnancy. The first procedure to be done after physical examination is emptying bladder with catheterization due to risk of high bladder rupture or neuromuscular dysfunction. Sometimes reduction of incarceration without uterin maneuver may be sufficient. Unfortunately, none of these methods would eliminate the underlying factor. Persistence of urinary retention may lead to complications like irreversible uterin ischemia, spontaneous or septic abortus, uterus rupture, bladder rupture, chronic neuromuscular dysfunction of bladder, rectal gangrene and even maternal death (8). Spring and Hymes reported that AUR developing in pregnancy was related to asymmetrical enlargement of uterus (anterior wall enlarges faster than posterior wall), thus cervix could lead to urinary retention by compressing bladder neck and urethra externally (9).

In traditional treatment of pelvic incarceration cases, preserving vesicourethral angle and decompressing bladder is recommended via putting uterus in anterior position instrumentally (pessary) or non-instrumentally. These procedures may be applied under spinal anesthesia or epidural anesthesia when needed. This instrument (pessary) may be removed beginning from the second trimester. Treatment should be done immediately to prevent pos-

sible severe complications. Although clean intermittent, continuous catheterization or suprapubic catheterization may be used for decompression of bladder but suprapubic catheterization is not recommended much (2,8). Devoe presented a case of urinary retention developing in early pregnancy first and reported that he treated this by supporting uterus via placing a vaginal instrument (2). Sacco et al. reported that they treated urinary retention developing due to pelvic incarceration in a pregnant woman via emptying bladder with urethral catheterization together with manual reduction and antibiotherapy (5). In our case, AUR developed on approximately the 14th week in all three sequential pregnancies. The point making this case interesting is the history of urinary retention on similar weeks in previous two pregnancies. No other pathologies except retrovert uterus were detected in our patient. Bladder was emptied via an urinary catheter and antibiotherapy was applied. Urinary retention did not recur after urinary catheter had been removed after 10 days and the patient was followed up in conjunction with Department of Gynecology and Obstetrics until the end of her pregnancy. The patient in whom urinary retention did not recur underwent caesarean delivery on the 39th week of gestation as she had two caesarean sections before. Urinary retention developing in a pregnant woman is an urgent condition that may lead to severe complications. Immediate catheterization should be done after detection of urinary obstruction. The patient should be followed up in conjunction with a gynecology and obstetrics specialist until the end of the pregnancy, physicians should be aware of urinary retention and should be informed about the fact that this condition may recur in her following pregnancies.

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