



Medical Sciences

## ACUTE URINARY RETENTION IN PREGNANCY

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### Abstract

Acute urinary retention in pregnancy due to retroverted gravid uterus is uncommon and an emergency condition. We present 2 such cases of acute urinary retention in pregnancy. Both the patients had retroverted uterus. This condition is most common in 1st trimester of pregnancy. Its low incidence and little published evidence often lead to suboptimal management. Successful management has been reported either by replacement of uterus in anterior position or by internal drainage of bladder.

**Keywords:** Urinary retention, pregnancy, urethral obstruction

### Introduction

AUR during pregnancy is an emergency presents as lower abdominal pain with a palpable bladder. Retroverted uterus is present in 15% of pregnancies during first trimester. Fundus usually enters the abdominal cavity by the end of the first trimester without causing urinary complications. This condition has been described in all trimesters but most commonly occurs between 10<sup>th</sup> and 16<sup>th</sup> week of gestation. Urethral obstruction by extrinsic compression from impacted and enlarging uterus has been postulated as the pathogenesis of urinary retention in such women<sup>1-4</sup>. Unless the pressure on the urethra from the impacted uterus can be relieved, pregnant women require either placement of a short term catheter or clean intermittent catheterization. Both procedures however carry a small risk of bladder infection<sup>5</sup>.

### Case one

A 26 year old primi had retention of urine at 11 weeks of gestation. She presented to us with cramping pain since last night. She had not passed urine since past 15 hours. On vaginal examination cervix was blue, uterus was retroverted and the size was consistent with 3 months of gestation. Transabdominal ultrasonography revealed a retroverted uterus with gestational sac and fetus located in the pelvic cavity. There was no clinical findings suggestive of urinary tract infection, no history of excessive intake of fluids, ingestion of drugs (sympathomemetics) or any past history suggestive of voiding difficulties. A 16fr Foleys catheter was inserted and 1200cc of urine was drained. Catheter free trial was given after a week, patient voided well without any post void residue. She was then discharged 24 hours after removal of catheter. The patient again presented with retention 4 days after

getting discharged from hospital, where in she was recatheterized for a week. Catheter free trial was given, patient voided to completion and she was discharged on advice to report to casualty immediately in case she does not void for 6 hours. Patient did not have any further episodes of retention till term.

### Case two

A 27yr old gravida 2 with 13 weeks of gestation presented with retention similar to the first case. She experienced urinary retention requiring urethral catheterization which drained 1000ml of urine. Transvaginal ultrasonography revealed retroverted uterus. She required placement of indwelling catheter for a period of 2 weeks, one attempt of catheter free trial after a week failed hence catheter was placed for a period of one more week. The further course was uneventful. Patient gave past history of urinary retention during her first pregnancy at 14 weeks for which she was catheterized for two weeks. The course of pregnancy till term was uneventful. The patient had a normal delivery.

### Discussion

Urethral obstruction caused by extrinsic mass has been reported in patients with uterine or vaginal leiomyomas, ovarian tumor, uterovaginal prolapsed or retroverted gravid uterus<sup>6</sup>. The cause of retention associated with retroverted gravid uterus has been reported to be mechanical compression of the lower bladder by the anteriorly and superiorly displaced uterine cervix<sup>7</sup>. Retroverted uterus is present in 15% of pregnancies during first trimester and the incidence of urinary retention due to a retroverted has been observed to be 1.4%. Therefore urinary retention caused by retroverted uterus has been suggested to be uncommon.

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In the above mentioned two cases except for retroversion of uterus contributing to urinary retention we could not find any other abnormalities such as urinary tract infection, bladder stone, cystocele and rectocele, excessive fluid intake, constipation, medication, fibroid uterus or pelvic tumor. According to Yang and Huang one case with recurrent urinary retention due to retroverted uterus was recognized in their 5 cases. The patient had urinary retention at 12 weeks of pregnancy requiring catheterization for 1 month because of repeat episode of acute urinary retention during her first pregnancy and she had same episode at 11 weeks of gestation during her second pregnancy. They however could not find any differences between the case with and without recurrence. Hence in cases of urinary retention secondary to retroverted uterus caution is advised to recurrence of retention during next pregnancies.

After placement of catheter in bladder the decision to remove catheter will depend on the amount of urine obtained and the likelihood that symptoms will return. The impacted uterus should be manually replaced in the anterior position. Clean intermittent catheterization and placement of a vaginal pessary are temporizing measures. Manual decompression is the most effective and definitive treatment in reducing the incarceration and restoring the blood supply to the gravid uterus. After the bladder is decompressed, the patient is placed in the dorsal lithotomy or knee chest prone position. Manual reduction of the incarcerated uterus is undertaken by inserting two fingers into the vagina along the posterior wall, while simultaneously pushing on the lower abdominal wall. In most cases, one is able to feel a sudden loss of resistance as the uterus is repositioned into its anterior location; it is important to apply gentle and slow pressure to prevent separation of the placenta or rupture of the uterus<sup>8</sup>.

## Conclusion

Urinary retention in pregnancy is an emergency and failure to make prompt diagnosis and institute treatment rapidly will result in irreversible uterine ischemia and spontaneous abortion, rupture of uterus or bladder intrauterine infection or death. Treatment of this condition is by placement of an indwelling catheter or by clean intermittent catheterization. There is no role for alfa-blockers or urethral dilatation.

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