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Unveiling the Uncommon: Acute Urinary Retention in Second Trimester Pregnancy due to Retroverted Uterus - A Self Case Report

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ABSTRACT

Acute urinary retention (AUR) during pregnancy is a rare yet significant complication, particularly when it occurs in the second trimester due to retroverted uterus. This case report sheds light on this unusual phenomenon, clinical implications, diagnostic approaches, and management strategies. A 27-year-old primigravida at 12 weeks' gestation experienced intermittent urinary retention. Foley catheterization relieved an acute episode, evacuating 1.2 liters of urine. Recurrent AUR required intermittent catheterization and probiotics. Gynecological examination and ultrasonography confirmed a retroverted uterus as the cause. Over four weeks, the patient improved, with the uterus repositioning anteriorly by the 16th week, leading to spontaneous resolution. This case highlights the rarity of second-trimester AUR due to retroverted uterus during pregnancy. The interplay of anatomical variations and physiological changes can result in unusual clinical presentations. Swift intervention, including Foley catheterization and patient positioning, achieved successful resolution. Elevated clinical awareness and personalized management are vital for unique pregnancy challenges.

KEYWORDS: Urinary retention; pregnancy; retroverted uterus**;** second trimester

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INTRODUCTION

Acute urinary retention refers to the abrupt and painful condition where the patient cannot empty their bladder when it is complete and can often be felt or detected through physical examination or tapping. This inability to urinate comes on suddenly, and during pregnancy, it is most commonly observed between the 10th and 16th weeks, although it can happen at any point in the pregnancy.[1] Acute urinary retention (AUR) is an infrequent yet severe complication that can arise during pregnancy. When it does occur, it is considered a medical emergency and manifests as lower abdominal pain accompanied by a bladder that can be felt. Based on historical records, AUR affects roughly 1 in 3,000 pregnant women and is often linked to uterine incarceration. AUR is uncommon during the early and middle stages of pregnancy and can result in serious complications such as bladder rupture, miscarriage, or even uterine rupture, putting both the mother and the fetus at significant risk to their health.[2]

The likelihood of acute urinary retention (AUR) in pregnant women without underlying health issues is approximately 0.47%. Risk factors for AUR in pregnancy encompass conditions like a retroverted and enlarged uterus, adenomyosis, uterine fibroids, cervical pregnancy, the presence of a maternal anterior sacral meningocele, pelvic adhesions, congenital uterine irregularities, endometriosis, and uterine prolapse.[3] In the initial trimester, about 15% of all pregnancies involve a retroverted uterus. The retroverted uterus is a rare factor leading to urinary retention during pregnancy, as it physically hinders the bladder's functioning. In early pregnancy, approximately 11% of women experience a retroverted uterus, and out of this group, only 1% encounter urinary retention that necessitates medical intervention.[4] Suggested approaches for managing urinary retention when a retroverted uterus is present involve catheterizing the bladder until the uterus moves from the pelvic to the abdominal position. Other options include manually repositioning the uterus, employing a vaginal pessary, and addressing the root cause of the retention through surgical procedures in severe

instances. Timely diagnosis and appropriate intervention can help avert serious complications[5]

In this personal case study, we explore the clinical scenario of acute urinary retention during the second trimester of pregnancy due to the anatomical position of a retroverted uterus. We aim to examine the patient's specific issues and the clinical approaches used to address the condition, thereby adding to the existing understanding of this unusual occurrence. Additionally, we investigate potential underlying causes and emphasize the importance of promptly identifying and intervening to safeguard the health of both the mother and the fetus.

CASE REPORT

In preparing this case report, informed consent has already been obtained from the patients. At 12 weeks of gestation on April 27, 2023, a 27-year-old pregnant woman who had not previously been pregnant arrived at the hospital's emergency room due to intermittent urinary retention and lower abdominal pain. This episode marked the first occurrence during her pregnancy. A Foley catheter of size 16F was inserted, successfully evacuating 1.2 liters of clear urine. Standard blood and urine tests yielded negative results. Normal voiding was observed an hour later, leading to the patient's discharge.

Within four weeks, the patient necessitated intermittent catheterization and daily probiotic administration to prevent catheter-associated infections. The patient's personal and familial medical history was devoid of noteworthy aspects. Kidney function analysis indicated a urea level of 14.7 mg/dL and a serum creatinine level of 0.51 mg/dL.

A gynecological examination revealed a retroverted uterus, a finding corroborated by ultrasonography, as shown in Figure 1. The patient was conclusively diagnosed with Acute Urinary Retention (AUR) during her pregnancy. The recommended course of action encompassed adopting a knee-chest-prone position daily. By the 16th week of gestation, the uterus had grown larger and repositioned anteriorly, ultimately resolving the patient's condition without intervention.

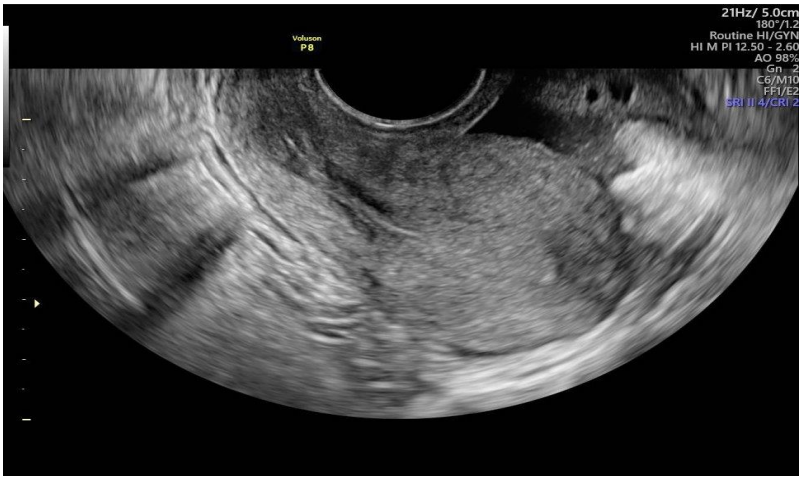

Figure 1. The transvaginal USG showed the retroverted uterus

DISCUSSION

Acute urinary retention (AUR) during pregnancy, particularly in the second trimester, is an infrequent yet notable complication that poses challenges for both patients and clinicians. This case report sheds light on a distinctive presentation: AUR attributed to a retroverted uterus, presenting in the second trimester of pregnancy. The discussion delves into the clinical implications, underlying mechanisms, diagnostic approaches, and management strategies encountered in this atypical scenario.

The leading factor behind urinary retention in connection with a retroverted pregnant uterus is the mechanical pressure generated by the anterior and superior displacement of the uterine cervix.[3,7] This shift, brought about by the retroverted uterus, puts pressure on the lower bladder and hinders the smooth passage of urine through the urethra.[6] The interplay between structural differences and physiological shifts in pregnancy highlights the intricate nature of urinary processes in these circumstances.[8]

The occurrence of a retroverted uterus, which can be observed in around 11-15% of pregnancies in both the initial and middle stages, emphasizes its significance in clinical obstetrics.[6] Surprisingly, even though this occurrence is rare, urinary retention associated with a retroverted uterus is observed at a rate of 1.4%. Clinical indicators such as urinary retention, vaginal bleeding, miscarriage, painful urination, overflow incontinence, incomplete emptying of the bladder, rectal pressure, tenesmus, and constipation are typically seen in the second trimester in cases of this condition.[7,8] These varied symptoms emphasize the complex interplay between anatomical adaptations and physiological responses during pregnancy.

Ultrasonography has proven to be a valuable complement to the clinical evaluation and physical examination for diagnosing a retroverted pregnant uterus and the related condition of Acute Urinary Retention (AUR).[9] Ultrasonography's non-invasive characteristics permit a thorough assessment of anatomical differences without

subjecting the patient to excessive discomfort. Approaches like manually repositioning the uterus and inserting an indwelling Foley catheter are used to relieve bladder pressure. Additionally, utilizing a tenaculum on the posterior lip of the cervix with the patient in Trendelenburg or knee-chest positions can aid in repositioning the uterus.[10] These interventions reflect the multidisciplinary approach required to address the intricate challenges posed by AUR associated with a retroverted uterus.

In the case discussed herein, the retroverted uterus was identified as the primary contributor to urinary retention, with no additional anomalies detected. The patient's history of recurrent AUR during a prior pregnancy underscored the complexity of the clinical scenario. Intermittent catheterization was employed for four weeks to manage the condition, with concurrent administration of daily probiotics to mitigate the risk of catheter-associated infections. As we expand our understanding of these complex interactions, we enhance our ability to provide comprehensive care and optimized outcomes for pregnant individuals facing such unique challenges.

CONCLUSION

In summary, this case underscores the rare occurrence of acute urinary retention resulting from a retroverted uterus during the second trimester of pregnancy. The unique presentation necessitated a multidisciplinary diagnostic approach, involving gynecological examination and ultrasonography. Swift intervention with a Foley catheter, coupled with patient-centered care such as adopting the knee-chest prone position, contributed to the successful resolution of this uncommon condition. This case serves as a reminder of the importance of tailored management strategies and highlights the need for heightened clinical awareness in addressing atypical challenges during pregnancy.

Conflict of Interest and Author Contributions

As a result, I declare that there are no conflicts of interest associated with this manuscript submission. All authors have disclosed any financial or personal relationships with individuals or organizations that could influence the research, analysis, or interpretation of the data presented in this case report.

All authors contributed to developing the idea, design, analysis, and interpretation of the data for this case report.

REFERENCES

I. Chen JS, Chen SC, Lu CL, Yang HY, Wang P, Huang LC, Liu FS. Acute Urinary Retention During Pregnancy--A Nationwide Population-Based Cohort Study in Taiwan. *Medicine (Baltimore)* 2016;95:e3265

II. Zhuang L, Wang XY, Sang Y, Xu J, He XL. Acute urinary retention in the first and second-trimester of pregnancy: Three case reports . World J Clin Cases 2021; 9(13): 3130-3139 [PMID: 33969100 DOI: 10.12998/wjcc.v9.i13.3130]

III. 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.

IV. Martínez-Varea A, Nohales-Alfonso F, Diago Almela VJ, Perales-Marín A. Arabin cerclage pessary as a treatment of an acute urinary retention in a pregnant woman with uterine prolapse. *Case Rep Obstet Gynecol.* 2013;2013:161376.

V. Yohannes P. Ultrasound in acute urinary retention and retroverted gravid uterus. Ultrasound Obstet Gynecol 2004; 23: 427.

VI. Yohannes P, Schaefer J. Urinary retention during the second trimester of pregnancy: a rare cause. *Urology*. 2002;59:946

VII. Heazell AE, Dwarakanath LS, Sundar K. An unusual cause of urinary retention in early pregnancy. *Am J Obstet Gynecol.* 2004;191:364–365

VIII. Weekes AR, Atlay RD, Brown VA, Jordan EC, Murray SM. The retroverted gravid uterus and its effect on the outcome of pregnancy. *Br Med J.* 1976;1:622–624.

IX. Hsu PC, Yu MH, Wang CY, Wang YK, Wang CK, Su HY. Asymptomatic uterine incarceration at term: Successful management of a rare complication in pregnancy. *Taiwan J Obstet Gynecol.* 2018;57:745–749.

X. Yang JM, Huang WC. Sonographic findings in acute urinary retention secondary to retroverted gravid uterus: pathophysiology and preventive measures. *Ultrasound Obstet Gynecol.* 2004;23:490–495