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Case Report

Acute urinary retention due to retroverted uterus during pregnancy: A case report

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Abstract

Uterus is retroverted in about 11% of women in early pregnancy but urinary retention due to retroverted uterus is a very rare disorder. If it is not diagnosed early and treated properly, it can cause severe complications. Suspicion of urinary retention from extremely retroverted uterus in pregnant women presenting with non-specific urinary symptoms or with urinary retention is important for early diagnosis and appropriate treatment. The following case presents a pregnant woman with urinary retention with a diagnosis of extremely retroverted uterus.

Key Words:

Pregnancy, urinary retention, retroversion, uterus

Introduction

Uterus is retroverted in about 11% of women in early pregnancy [1]. Incarceration of the uterus occurs when uterus fails to ascend into the abdominal cavity while pregnancy advances [2]. It is a rare disorder and approximately seen 1 in 3000 pregnancies [2]. It causes non-specific and generally urinary symptoms like dysuria, frequency, urinary incontinence, and urinary infection in early pregnancy. However if it is undiagnosed and pregnancy advances, it can cause severe complications like intrauterine growth retardation, oligohydramnios, rupture of the uterus, incision of bladder, cervix, vagina, posterior or anterior uterine wall during caesarean section, urinary retention, renal failure and sepsis [3]. We describe a case of 34-year-old pregnant women who presented with severe abdominal pain and urinary retention resulted from extremely retroverted gravid uterus.

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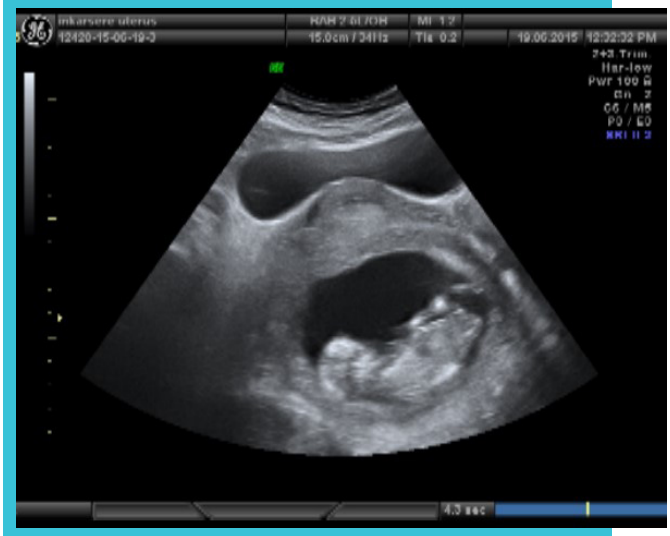
Case Presentation

A 34-year-old women who had a history of two normal vaginal deliveries presented our clinic with urinary retention and severe abdominal pain at 13 weeks of gestation. She reported that she cannot empty her bladder for the last 2 days. Her urine analysis was normal. Pelvic examination revealed cervix displaced anteriorly. Ultrasonographic exam was done and cervix was seen displaced anteriorly and superiorly and uterus was extremely retroverted. After she had tried to urinate, a Foley catheter was replaced and drained 1350 ml urine. The patient's symptoms resolved after catheterization. After emptying the bladder, successful manual reduction was performed with the patient in trendelenburg posi-

tion with ultrasonographic guiding. Digital pressure applied to the uterine fundus through the posterior fornix until it was dislodged from retrovert position. The symptoms resolved after manual reduction and she can void without any difficulty. She was discharged after one day.

Figure 1.

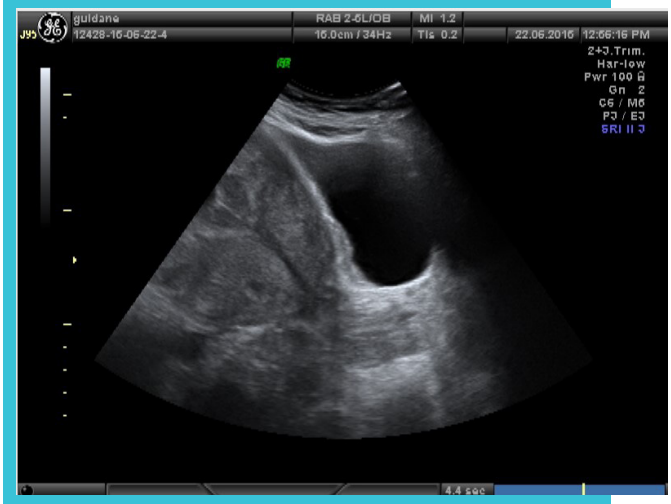


Ultrasonography scan showing retroverted uterus and cervix displaced anteriorly and superiorly

Discussion

Approximately 11% of pregnancies involve a retroverted uterus but urinary retention due to extremely retroverted gravid uterus is a rare condition [4]. The symptoms are due to pressure of retroverted uterus to the adjacent pelvic organs [5,6]. The predisposing factors for incarceration of uterus are endometriosis, pelvic inflammatory disease, uterine anomalies and postoperative adhesions but no risk factor was found in majority of cases in literature [7-10]. Our patient also had any of these predisposing factors. Usually symptomatic urinary retention due to retroverted uterus occurs before 20 weeks of gestation. When cervix is displaced anteriorly it causes compression to urethra and bladder neck [11]. When a pregnant woman presents with symptoms of urinary tract infection with negative urine culture, a pelvic examination should be done and retroverted uterus compressing urethra should be kept in mind. To be aware of possibility of urinary retention due to retroverted uterus in pregnancy is important for diagnosis. If urinary retention due to retroverted uterus is detected, postvoidal urine volume should be controlled which will also resolve the patient symptoms [12]. An early diagnosis is also important for treatment of patient because reduction of uterus is more likely successful in early pregnancy and late complications like bladder atony, post-obstructive diuresis and renal failure can be seen if urinary retention due to retroverted and incarcerated uterus is undiagnosed [2,12,13].

Figure 2.



Ultrasonography scan after manual reduction of uterus

There is controversy in treatment of urinary retention due to incarcerated uterus in literature. It is known that some cases of incarcerated uterus resolves spontaneously with growing uterus with advancing gestational age and some authors stated that bimanual reduction of uterus could increase the risk of abortion [1,10,14]. However there is no reported complication or pregnancy loss after bimanual reduction of retroverted and incarcerated uterus in literature and it is supported that once it is reduced, incarceration tends not to recur with advancing pregnancy [15]. However waiting for spontaneous reduction raises the

risk of persistent uterine incarceration and late complications like intrauterine growth retardation; oligohydramnios; rupture of the uterus; incision of bladder, cervix and vagina; urinary retention; renal failure and sepsis [3]. Reduction of uterus by pressure applied to uterine fundus with two fingers with vaginal examination and if needed combined with rectovaginal examination in knee-chest position is usually recommended as first-line treatment for incarcerated uterus in early pregnancy [3]. Empty bladder and bowel is important before procedure and appropriate anesthesia can be needed in some cases for relaxation of the patient [16]. If manual reduction is failed, there are cases in literature with using colonoscopic insufflation of sigmoid colon to facilitate the manual repositioning of uterus [17]. When all these conservative managements are failed, more invasive treatment modalities like reduction with laparoscopy or laparotomy can be performed but these interventions carry the risk of maternal and fetal morbidities [18, 19]. In conclusion suspicion of urinary retention resulting from extremely retroverted uterus in pregnant women presenting with non-specific urinary symptoms or with urinary retention is important for early diagnosis and appropriate treatment. Delay in diagnosis may result in severe complications. As it is rarely seen the most appropriate treatment modality is not clear in the literature but from the cases reported in the literature, bimanual reduction seems to be safe and successful in early pregnancy.

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Declaration of Interest
None

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