Case Report

Torsion of the gravid uterus: A rare cause of abdominal pain

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ABSTRACT

Uterine torsion in pregnancy is a rare clinical entity with a non-specific clinical presentation. Here, we present a case of uterine torsion, which was diagnosed at laparotomy done for the lower segment cesarean section (LSCS) in a case of central placenta previa with the fetus in transverse lie. At 36.4 weeks period of gestation, the patient complained of severe left-sided abdominal pain which was not suggestive of labor. This abdominal pain was refractory to analgesics. Emergency LSCS was done which confirmed uterine torsion as well as anterior sacculation.

Key words: Anterior sacculation, Central placenta previa, Gravid uterine torsion, Transverse lie

Torsion of the pregnant uterus is defined as a rotation of more than 45 degrees around the long axis of the uterus. It can occur in all age groups during the reproductive period, in all parity groups, and during any trimester of pregnancy [1]. Some of the risk factors for uterine torsion during pregnancy include fetal malpresentation such as transverse lie [2], uterine malformation, and coexistent fibroid uterus [1]. The clinical features include abdominal pain mainly involving the side under ligament tension secondary to torsion, birth obstruction if the patient is in labor, intestinal, and urinary symptoms [1]. In severe cases, the patient may present with vaginal bleeding, and shock [1]. In view of the rarity of the condition and non-specific clinical presentation, pre-operative diagnosis becomes difficult [3]. Acute torsion of the uterus is associated with a fetal compromise with perinatal mortality reported in 12% of cases [4]. Uterine torsion initially causes venous obstruction which increases the pressure in the placental cotyledons causing abruption and fetal distress. When it results in arterial obstruction, it can result in a decrease in the placental perfusion which can result in fetal demise [5].

Anterior sacculation of the gravid uterus may result if the uterus is prevented from assuming its abdominal position after 12th week of pregnancy, due to persistent retroflexion of the uterus which may result from posterior wall fibroid, dense adhesions between the posterior wall of the uterus, posterior peritoneum, and incarceration of the uterus [6]. This results in the anterior wall of the uterus undergoing hypertrophy mainly involving the upper part of the uterus with consequent distortion in the uterine anatomy, to accommodate the product of conception which may give rise to malformation. This rare abnormality has been known to cause spontaneous abortion, intrauterine fetal demise, preterm delivery, retained placenta, and postpartum hemorrhage [7]. Uterine torsion is a rare clinical entity, which can be seen in all age groups, all the parity groups, and when occurs in pregnancy, can be seen in any trimester of pregnancy. Uterine torsion may be associated with adverse fetal outcomes.

This case report is published as it is a rare case of uterine torsion with anterior sacculation in the third trimester of pregnancy in a known case of central placenta previa with the transverse lie, where the patient presented with abdominal pain with no signs of labor.

CASE REPORT

A 35-year-old primigravida presented to the Department of Obstetrics and Gynecology, Goa Medical College, Bambolim Goa, during the month of January 2020 at 33.6 weeks of gestation. The patient was married for 1 year, had a history of amenorrhea for 8 months, and a history of hypothyroidism detected in the 2nd month of pregnancy in view of serum TSH 24 microIU/ml. The patient was started on tablet Thyroxine 50 µg, which was gradually increased to 100 µg and 125 µg on alternate days. The patient was continued on the same dose till delivery. An ultrasound (USG), done at 32 weeks, showed central placenta previa with a transverse lie. Repeat USG at 36 weeks also showed the same. The patient was admitted for safe confinement. Menstrual history

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was significant for dysmenorrhea for the last 3 years before conception.

On examination, vitals were stable. Per abdomen examination showed that uterus of 32–34 weeks, relaxed, transverse lie with head in the right lumbar region, liquor adequate, and fetal heart rate (FHR) was 140 beats/min. Routine investigations such as blood tests, renal function tests, electrolytes, liver function tests, uric acid, and fundoscopy were within normal limits.

The patient was managed conservatively in the ward with bed rest and restricted activity and daily consumption of oral hematinics. At 36.4 weeks, the patient started developing left-sided abdominal pain, mainly involving the left side lumbar region associated with left-sided loin pain. On per abdomen examination, as the uterus was relaxed, a conservative line of management was tried. The conservative line of management included analgesics 100 mg tramadol in one pint of 0.9% normal saline over 15 min. However, the pain was refractory to the analgesia used. Furthermore, the FHR was monitored over cardiotocography which showed a reactive tracing with a good beat to beat variability and accelerations.

However, the pain did not subside and hence, the patient was taken up for an emergency lower segment cesarean section (LSCS). Operative findings were as follows: The uterus was dextrorotated to the right side by approximately 150°, such that the left adnexal structures were seen on the right side and there was an inability to visualize the right adnexal structures, intense decidual reaction on the posterior surface of the uterus in the lower part with dense adhesions, lack of fundal dominance, anterior sacculation was seen, bilateral fallopian tubes, and ovaries were unremarkable (Figs. 1 and 2).

As the patient was under general anesthesia and with the tentative diagnosis of central placenta previa in labor, a decision was taken to expedite the delivery. Manual correction of the uterine dextroversion was done after which the anterior surface of the lower uterine segment was visualized. The presentation had changed to cephalic on manual correction of the uterine dextroversion. The baby was delivered by vertex, Male/2.45 kgs/Apgar – 7/8.

In contrast to the USG report showing central placenta previa, the placenta was seen to be Type 2 posterior. Both the transverse lie and USG diagnosis of central placenta previa were thought to be due to the rotation of the uterus due to torsion. No uterine anomaly was seen.

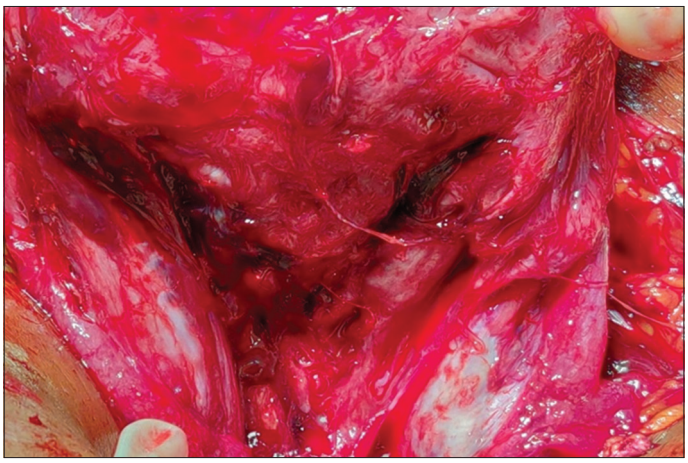

Figure 1: Posterior surface of the uterus showing intense decidual reaction with dense adhesions in the lower part of the uterus possibly due to endometriosis, which resulted in this lower part acting as a fixed part (pivot), around which torsion occurred

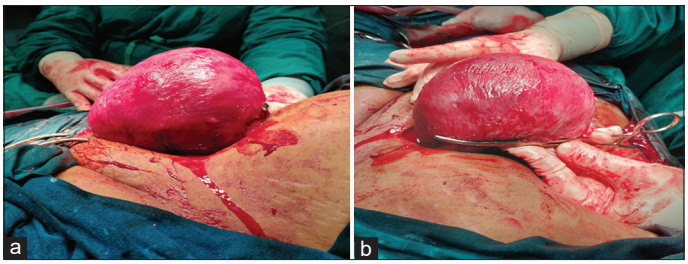

Figure 2: (a) Profile view of the uterus showing lack of fundal dominance and anterior sacculation. (Artery kept at the level of both the uterine cornu); (b) artery placed at the level of fundus showing lack of fundal dominance

DISCUSSION

The above case was a rare case of uterine torsion in the third trimester of pregnancy in an elderly primigravida who was a known case of central placenta previa (USG finding) with transverse lie with hypothyroidism. Uterine torsion is a rare condition with a non-specific presentation and is a potentially dangerous complication of pregnancy.

A detailed search of the literature showed that only 38 cases are reported so far. Of the 38 cases of uterine torsion reported, one resulted in spontaneous abortion and six resulted in a stillbirth. Fetal mortality was 18% [2]. However, in our case, the fetal outcome was good. Most of the cases of uterine torsion are detected during laparotomy at the time of LSCS, as in our case, where it was detected as an incidental finding during the emergency cesarean section.

Uterine torsion can be confounded by other factors such as abnormal FHR pattern, and failure of progress of labor, which was not seen in our case, as the patient was taken up for LSCS within six hours of abdominal pain. Some of the other factors that are associated with torsion include transverse lie [2], uterine fibroid, and an adnexal mass. Like in our case, where the fetus was in transverse lie throughout admission in the ward, which was probably due to anterior sacculation and was probably a cause for uterine torsion in this case, as the head was toward the right side and the uterus had undergone torsion to the right. Dense adhesions seen on the posterior surface of the lower part of the uterus could be attributed to endometriosis as the patient gives a history of dysmenorrhea with primary infertility. These adhesions being present in the lower part of the uterus acting as a pivot about which the upper part underwent torsion. Furthermore, the intense decidual reaction has contributed to the adhesions.

The fact the left adnexal structures was seen on the right side during LSCS, explains the left-sided lumbar pain which is due to stretching of the adnexal structures. The presence of abdominal pain in the above case led to the dilemma of abruption, also the site of the pain led to differential diagnosis of renal colic. However, USG done during the episode of pain ruled out both the above differential diagnosis. Magnetic resonance imaging done

for diagnosis of torsion of the uterus shows X-shape of the vagina which is normally is as an H-shaped structure [8].

CONCLUSION

Torsion of the gravid uterus is a rare condition, mainly due to its non-specific presentation. Fetal malpresentation (transverse lie), along with adhesions on the posterior surface of the uterus which may be secondary to intense decidual reaction, and endometriotic deposits would explain the uterine torsion. This case report has been published as the possibility of uterine torsion is to be kept in mind when a pregnant patient complains of intense pain which is unrelated to uterine contraction.

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