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Case Report

Successful laparoscopic management of adnexal torsion in early pregnancy: A case report

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ABSTRACT

Background: Ovarian torsion is an urgent gynaecological surgery and can occur during pregnancy. Ovarian torsion during pregnancy carries significant risk to pregnant woman and intrauterine fetus. Diagnosing ovarian torsion during pregnancy can be challenging as most frequently ,patients present with abdominal pain and non specific symptoms. If the diagnosis of ovarian torsion is missed, it can lead to ovarian necrosis and sepsis with subsequent loss of ovarian and tubal function. This condition not only threatens the pregnancy but also has great implications for future fertility.

Case Report: A 26year-old G2P1L1 at 5 weeks gestational age presented to us with right sided lower abdominal abdominal pain radiating to back, burning micturation, and low grade fever. Ultrasound showed an enlarged edematous enlarged right ovary with two hemorrhagic cysts with absent flow on color Doppler. The patient underwent emergency laparoscopic surgery, during which the necrotic adnexa was removed. She was placed on progesterone therapy postoperatively and eventually delivered a healthy baby at term.

Conclusion: Ovarian torsion though is extremely rare problem in pregnancy, it should be taken into consideration in differential diagnosis of abdominal pain.

1. Introduction

Torsion of the ovary is the total or partial rotation of adnexa around its vascular axis or pedicle. Ovarian torsion classically occurs unilaterally in pathologically enlarged ovary. However very rarely bilateral ovarian torsions can also occur.[1] Torsion of a normal ovary is unsual but is common in adolescents.[2,3] The process can involve only the ovary but more commonly affects both the ovary and the fallopian tube (adnexal torsion).[4,5] The common predisposing factors for torsion include moderate size cyst, free mobility and long pedicle. Ovarian torsion during pregnancy is a rare but serious condition with a high patient morbidity and fetal mortality if not immediately treated. Complete torsion causes venous congestion, hemorrhage and necrosis of ovary and may necessitate removal of the ovary if there is no viable tissue left during surgery. Ovarian torsion rises five fold in pregnancy approximately 5 per 10,000 pregnancies.[6,7] Ovarian torsion in pregnancy is increasing in frequency due to growing prevalance of ovarian stimulation treatment. After ovarian stimulation, the incidence of ovarian torsion in pregnancy rises to 6%, reaching up to 16% in cases of ovarian hyper stimulation syndrome. Right ovarian torsion is more common that left due to longer ovarian ligament and the presence of sigmoid colon at the left adnexa which may prevent torsion of left ovary. The most common cause of torsion in pregnancy is a corpus luteum cyst, which usually regresses spontaneously by the second trimester. Ovarian torsion, therefore, occurs most frequently in the first trimester, occasionally in the second, and rarely in the third trimester.[8] Since early diagnosis and intervention lead to a better outcome for

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mother and fetus, ovarian torsion should be suspected for all acute abdominal pain during pregnancy. Here we present, a case of ovarian torsion during early pregnancy.

2. Case Report

A 26-year old G2 P1 L1 (previous CS) with 5 weeks of gestation (spontaneous pregnancy)presented with new onset of right abdominal pain since five days. The pain was colicky in right lower quadrant with sudden onset, radiating to back and with no relieving factor. She also complained of burning micturation and low grade fever. She had visited a private clinic and was clinically suspected as case of ureteric colic. She had been under treatment for ureteric colic but since there was no relief in pain, she was reffered to our hospital for further evaluation. There was no history of vaginal bleeding or discharge There was no gastrointestinal symptoms or any recent illness. There was no history of and risk factors for adnexal torsion such as ovarian hyperstimulation, ovarian cyst and previous history of torsion.

On examination, she was febrile, pulse: 92 per minute BP:110/70 mm of Hg. Per abdomen, there was tenderness in right lower quadrant. There was no guarding or rigidity. The pelvic examination revealed bulky uterus with closed cervix with right adnexal fullness and tenderness, with no vaginal discharge. Urgent ultrasound with doppler revealed bulky right ovary of size 7cm X 4cm with diffusely edematous stroma with two well-defined hemorrhagic cyst of 3.4 cm X 3.5 cm and 3 cms X 2.8 cms. Flow was not clearly visualized. A well-defined intrauterine gestational sac corresponding to 5weeks 4 days was seen.

Fig. 1:

Her blood investigation revealed leucocytosis with WBC count of 16000 cells/ cmm. Rest all other investigations were within normal limit After counselling the patient about risk of miscarriage, informed consent for laparoscopy with possible need for salpingo-oophrectomy was taken. During laparoscopy, enlarged, hemorrhagic, gangerous, almost necrotic ovarian mass of 5X8 centimeter was present in right adnexa which was twisted around pedicle three times. Right

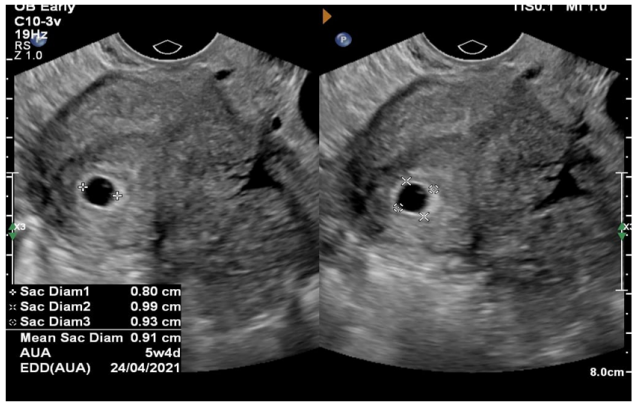

Fig. 2:

fallopian tube was also gangerous which was attached to the ovarian mass. There was no free intraperitoneal fluid. Left sided fallopian and ovary was normal. Untwisting of the pedicle was performed but there was no change in color of the right adnexa after detorsion. Hence, right salpingo-oophrectomy was done. Her histopathology was consistent with adnexal torsion with extensive area of hemorrhage, infarction and dense neutrophilic infiltrate.

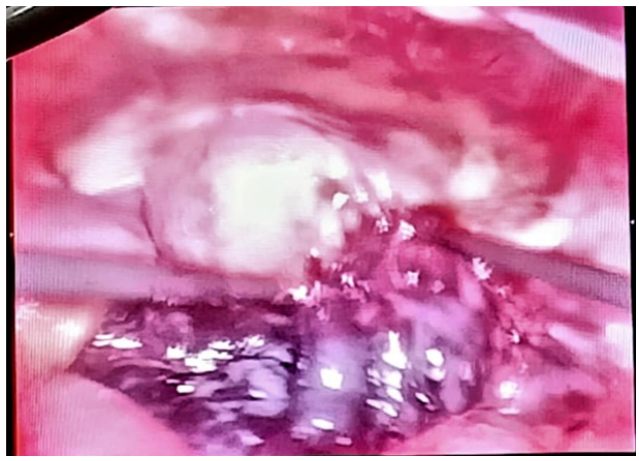

Fig. 3:

2.1. Outcome and follow up

Her postoperative period was uneventful and was discharged on third postoperative day. She was placed on progesterone support postoperative which was continued until end of first trimester Her follow up scan showed normal growth and development of the fetus. Rest of her antenatal period was unevenful. At term, she delivered a healthy female baby of 2.8 kgs.

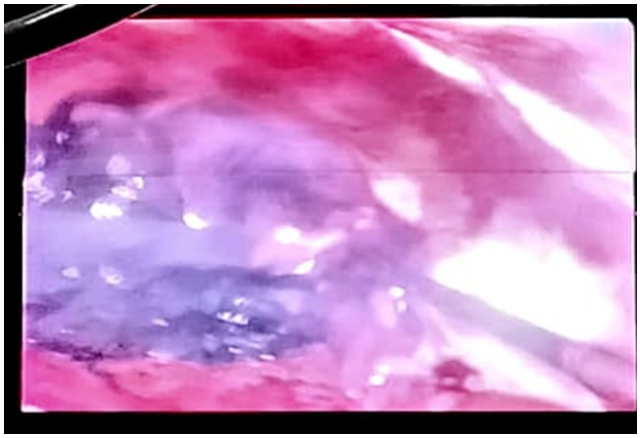

Fig. 4:

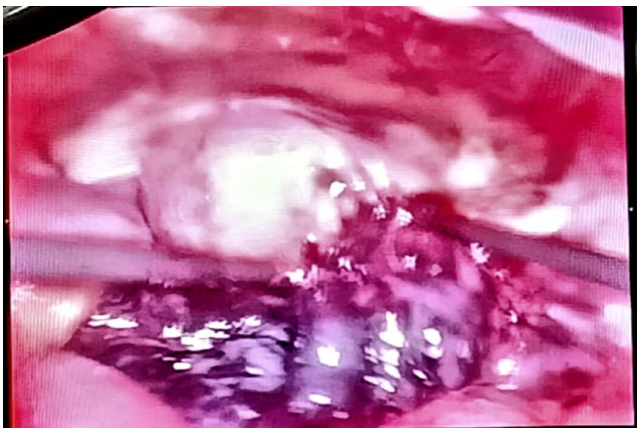

Fig. 5:

3. Discussion

The management of ovarian torsion during pregnancy can be challenging because of fetal loss and the possibility of surgery related complications. Early diagnosis is essential as it makes conservative approach possible with good functional results. The diagnosis of twisted ovarian cyst which is an acute abdominal emergency can be made in the majority of cases, although the symptoms are non specific for ovarian torsion and can be confused with other acute abdominal conditions such as ectopic pregnancy, appendicitis, ureteric or renal colic and bowel obstruction. The most common clinical presentaton is acute onset of severe, colicky, continuous or intermittent unilateral pelvic pain that is usually unremeting but can wax and wane in case of incomplete, intermittent torsion.Yet a large number of patients might not present with such typical picture, with pain escalating over a period of time. It may radiate to the ipsilateral lumbar region making the diagnosis more confusing and raising the possibility of urological cause.[9] Our case was initally misdiagnosed as ureteric colic as she presented with abdominal pain radiating to back associted with burning micturation. Presence of ovarian mass more than 5cm make ovary prone for torsio.[10,11] In this case, the risk factors were pregnancy with enlarged ovary with hemorrhagic cysts. Ovarian torsion occurs most frequently in the first trimester. In the present case, torsion occured in early first trimester. The patient also had marked leukocytosis which is reported to be a finding associated with adnexal necrosis.[12] Ultrasound with doppler is the diagnostic modality of choice as it can evaluate ovaries and its perfusion. The ultrasonic features of ovarian torsion includes unilateral ovarian enlargement, ovarian edema, abnormal adnexal position, free fluid in the Douglas pouch, the absence/decrease of blood flow in the ovary, and the whirlpool sign (coiled vessels seen at level of twist) all of which are associated with the pathophysiological changes observed following ovarian torsion.[13,14] In our case, ultrasound with doppler played an important role in the preoperative diagnosis of ovarian torsion. If torsion is suspected, surgical intervention - laparoscopy or laprotomy is indicated. Torsion of the adnexa had traditionally been treated by surgical excision of the affected structure without untwisting, because of the fear of emboli departing from thrombosed ovarian veins. Several recent reports have described successful conservative management with untwisting of the twisted adnexa.[15,16] In our case we performed laparoscopic salpingo ooperectomy after attempting to untwist the adnexa but had to perform adnexectomy as there was no repurfusion after detorsion. Postoperative progesterone supplementation is recommended when corpus leutum removed prior to 9 weeks period of gestation.[17,18] As our patient was only 5 weeks pregnant, she was put on progesterone support postoperative which was continued until 12 weeks period of gestation.

4. Conclusion

Most common causes of ovarian torsion in pregnancy is corpus cyst which regresses by 12-16 weeks. Ovarian torsion therefore occurs more frequently in first trimester. Ovarian torsion though is extremely rare problem in pregnancy, it should be taken into consideration in differential diagnosis of abdominal pain. The diagnosis of ovarian torsion in pregnancy is often missed due to nonspecific clinical features and uncommon objective findings. Surgery is the mainstay of treatment which can be either laparoscopy or laprotomy. Early diagnosis followed by timely surgical intervention helps in preserving ovarian function and future fertility.

5. Source of Funding

None.

6. Conflict of Interest

None.

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