



## SUCCESSFUL MANAGEMENT OF OVARIAN CYST TORSION DURING FIRST TRIMESTER PREGNANCY: A CASE REPORT

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### ABSTRACT

Adnexal torsion is an unusual cause of acute abdominal pain during pregnancy. In this case we report a 22-year old primigravida with 7 weeks gestational age presenting with partial torsion of the left ovarian cyst. She presented to emergency department with acute pain abdomen. She was diagnosed to have partial torsion of left ovarian cyst during pregnancy and oophorectomy was done. Her pregnancy is being followed up and she is currently at 9 weeks of gestation. Although the safety of antepartum surgical intervention has been accepted, abdominal surgery nevertheless carries some risks to a pregnant woman and unborn foetus, and so the choice of management necessitates a weighing of risks based on characterization of the adnexal mass and gestational age.

**KEYWORDS :** Adnexal torsion, Oophorectomy, Ovarian cyst

### INTRODUCTION

Ovarian torsion, first described by Kuestner in 1891, results from partial or complete rotation of the ovarian pedicle on its long axis, potentially compromising venous and lymphatic drainage. It is a rare condition in the pregnancy and it is typically detected in the right side. The left side is thought to barely have space because of the sigmoid colon. Ovarian torsion is a disorder with a very high patient morbidity. When the patient is pregnant this can also lead to foetal mortality and potential loss of fertility for the patient. Incidence is 5 per 10,000 pregnancies. We report a case of 22 year old primigravida with 7 weeks gestational age presenting with torsion of the ovarian cyst

### CASE REPORT

A 22 year old Primigravida with 7 weeks of gestational age came to emergency Department on 23/9/2020 with complaining of pain in lower left side abdomen since 8 to 10 hours. Her LMP : 02/08/2020, EDD : 09/05/2021. Her menstrual cycles were regular. She described the pain as sharp non-radiating type of pain in the left iliac fossa with sudden onset, with no relieving factors. She gave no history of vaginal bleeding or discharge. There was no history of diarrhoea, constipation, fever, urinary complaints or any recent illness. She conceived spontaneously. No significant past medical and surgical history noted.

On Examination : She was averagely built, conscious and cooperative, Her vitals pulse-72/min, b.p-110/70 mm Hg stable. On Abdominal examination : Abdomen soft, Tenderness present in the left iliac fossa, No guarding or rigidity. On Local examination : external genitalia healthy. Per speculum : Cervix - healthy.

Bimanual examination: Uterus anteverted, bulky about 6-8 weeks size, Tenderness present in left fornix.

Investigations : Routine Blood and urine investigations were within normal limits, USG : Uterus with single G sac, CRL : 9 mm (with 6 weeks 6 days gestation). left ovary : enlarged, 5.2x4.7 cm in size ,with altered echotexture with echogenic stroma, with no vascularity noted in ovary on colour doppler s/o ovarian torsion and appx 26× 24 mm sized cyst with fine internal septation noted in left ovary s/o haemorrhagic cyst, right ovary : normal, No evidence of free fluid in the abdomen.

With the provisional diagnosis of twisted ovarian cyst with no vascularity, for which emergency laparotomy was done.

Intra-operative findings: left ovary : partial torsion of adnexa about 5×4cm was present, twisted left fallopian tube with ovarian normal tissue ,some normal part of tissue and some bluish part of ovary is noted. Following the de-torsion of left ovary resumption of its blood supply identified, left oophorectomy was done by HOTDOG IN BUN TECHNIQUE. right ovary and tube: normal, Uterus appears normal.

Postoperative period was uneventful, Injection Hydroxyprogesterone caproate was given. USG done on 7th post-operative day: single live intra uterine gestation of 7 weeks 6days gestational age, Pt was discharged on 7th POD after suture removal. Follow up : she had Regular antenatal visits till date.

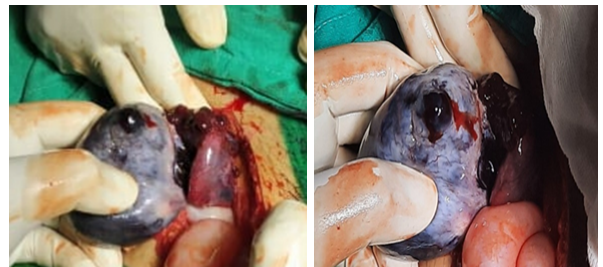


Figure 1 And 2 : Torsion



Figure 3: Hotdog in Bun Technique

## DISCUSSION

Ovarian torsion during pregnancy is a rare condition. The symptoms are nonspecific, and can be confused with other acute abdominal conditions such as appendicitis, ureteral or renal colic, cholecystitis and bowel obstruction. The presence on ultrasound of an ovarian mass should raise the suspicion for adnexal torsion. Adnexal torsion involves the rotation of the ovary on its ligamentous supports often leading to interruption of its blood supply and in some cases necrosis. Adnexal torsion accounts for 2.5–5% of all gynaecological emergencies. Adnexal torsion is rare but its frequency is increasing with the increasing use of fertility treatments which can cause ovarian hyperstimulation. A high index of suspicion and subsequent rapid organisation of an emergency laparoscopy would ensure protection of future ovarian function and fertility.

Maintenance of fertility by acting rapidly when adnexal torsion is suspected is of paramount importance when considering that 70–80% of cases are encountered in women of reproductive age. There is an estimated pregnancy coexistence rate of 15–25%.

The commonest type of ovarian tumours encountered in pregnancy are cystic teratoma, para-ovarian cyst, serous cystadenoma, corpus luteal cysts, luteomas etc.

Differential diagnosis includes: uterine leiomyomas, non-pregnant horn of bicornuate uterus, appendiceal abscess, diverticular abscess, pelvic kidney, retroperitoneal tumours, ectopic pregnancy and retroverted gravid uterus.

Complications of the cyst associated with pregnancy are torsion of the cyst, rupture, infection, malignancy, impaction of cyst in pelvis causing retention of urine, obstructed labour and malpresentations of the foetus.

Some studies have suggested surgical intervention for concerns of malignancy, tumour torsion, tumour rupture, or obstruction of labour. Other studies have recommended the principle of observation, finding that most ovarian masses can either remain uneventful or resolve throughout pregnancy and that the incidence of the above risks was actually low. Its most common cause 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.

## MANAGEMENT

Cysts less than 6 centimetres in diameter and appearing benign on ultrasound are generally treated conservatively as they may undergo spontaneous resolution. Corpus luteal cysts regress by 12 to 16 weeks. Cysts more than 10 centimetres in size are usually resected due to increased risk of malignancy, rupture or torsion. Management of cysts between 5 to 10 centimetres is controversial.

If the ovarian cyst is diagnosed in the first trimester, it is better to wait till 16 weeks when the implantation of pregnancy is more secure and also the cyst may disappear spontaneously. Persisting tumours are treated by cystectomy or ovariectomy as indicated. Ovarian tumour or cyst can be easily removed till 28 weeks of gestation thereafter it is not readily accessible and may precipitate preterm labour. Ovarian cyst which ruptures, or undergoes torsion or if it shows evidence of malignancy, requires immediate surgery, irrespective of the period of gestation.

A simple cystectomy can be performed in the absence of overt malignancy. Previously untwisting of the pedicle was avoided to prevent emboli and toxic substances related to hypoxia,

from entering peripheral circulation. But recently, re-establishing ovarian circulation by untwisting, has shown to result in viable ovarian tissue with no systemic complications.

## CONCLUSION

Ovarian torsion in pregnancy is a rare condition. Diagnosis depends on clinical presentation and ultrasound evidence of an enlarged adnexal mass. Surgery when required. Oophorectomy is an effective surgical method to prevent recurrence; plication of utero-ovarian ligaments remains the most anatomically feasible method.

Although the safety of antepartum surgical intervention has been accepted, abdominal surgery carries some risks to a pregnant woman and unborn foetus, and so the choice of management necessitates a weighing of risks based on characterization of the adnexal mass and gestational age.

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