

A Case Report of Ovarian Torsion

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Abstract: Ovarian torsion is a rare but emergency condition in women. Early diagnosis is necessary to preserve the function of the ovaries and tubes and prevent severe morbidity. Ovarian torsion refers to complete or partial rotation of the adnexal supporting organ with ischemia. It can affect females of all ages. Ovarian torsion occurs in around 2%–15% of patients who have surgical treatment of adnexal masses. The main risk in ovarian torsion is an ovarian mass. The most common symptom of ovarian torsion is acute onset of pelvic pain, followed by nausea and vomiting. Pelvic ultrasonography can provide information on ovarian cysts. Once ovarian torsion is suspected, surgery or detorsion is the mainstay of diagnosis and treatment.

Keywords: Abdominal pain, Ovarian cyst, Ovarian torsion, Pelvic pain, Ultrasound

1. Introduction

Ovarian torsion, which affects females of all ages, is a gynecological emergency. It refers to a complete or partial rotation of the adnexal supporting organ, resulting in ischemic changes in the ovary. Torsions more commonly involve both the ovary and fallopian tube, and there are fewer cases of isolated torsion involving either one (one in 1.5 million women). Torsion involving paratubal or paraovarian cysts has also been found. Early diagnosis and surgery are essential to protect ovarian and tubal function and prevent severe morbidity.

2. Case Report

A 38 Year old female came with complaints of lower abdominal pain with continuous, non radiating pain, no aggravating or relieving factors and with complaints of vomiting since morning 4 episodes, no other co morbidities.

On examination patient general condition fair, afebrile, Mild pallor, No pedal edema.

Systemic examination CVS and RS normal

Per abdomen examination- Soft, mild tenderness present in left iliac fossa.

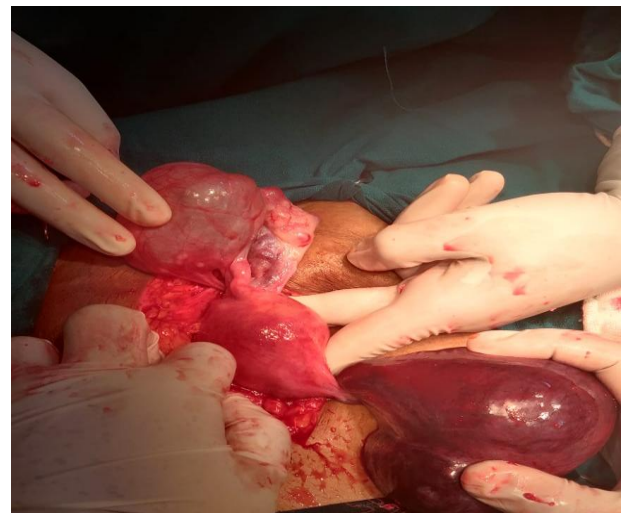
Per vaginal examination-Cervix irregular hypertrophied, Uterus slightly bulky, uterus deviated to right side, No cervical motion tenderness, A cystic mass of 6*8cm felt on left fornix, minimal tenderness present in left fornix.

USG done shows Right ovary could not be visualized and a cyst measuring 4.7*5.1cm noted in right adnexa. Peripheral vascularity is maintained in the present scan

Left ovary could not be visualized a cyst measuring 9.8*3.4*7.5cm with few internal echos and septations seen in the left adnexae.

Peripheral vascularity reduced on left side when compared to right side, fluid also appears turbid. Free fluid also seen around, suggestion of pedicle seen medial to left side cyst,

tenderness also elicited. Twisted adnexal cyst/ Torsion-detorsion to be considered. CA 125 is 5.9 U/ml. Patient taken up for emergency laprotomy with Right cystectomy and with left salpingoophorectomy done. HPE shows Benign serous cystadenoma with areas of hemorrhage.



3. Discussion

Ovarian torsion due to an adnexal mass causes various symptoms and signs on clinical presentation. The most common symptom is acute onset of lower abdominal pain, followed by nausea and vomiting. Some patients experience waves of nausea with or without vomiting. The abdominal pain is usually off and on with a sudden onset. Most reported patients presented for evaluation 1 or more days up as late as 210 days after pain onset. Premenarchal patients tended to mention diffuse pain because it was difficult for them to localize the pain. The uncomfortable symptoms and signs were considered to be caused by the adnexal torsion. Ovarian torsion without infective disease resulting in a low-grade fever has been found in some patients.

On clinical presentation, the first approach to a patient is a medical history and physical examination. The medical history should include any recent diagnosis of an adnexal mass, recurrent abdominal pain, and low-grade fever. The physical examination should include a search for a pelvic

mass or pain. Laboratory evaluation should include serum human chorionic gonadotropin, a hematocrit, white blood cell count, and electrolyte panel.

There is no serum marker for a diagnosis of adnexal torsion. Several serum markers can hint at an adnexal tumor type. Serum human chorionic gonadotropin can reveal pregnancy or an ovarian germ cell tumor. CA-125 may indicate a malignant ovary tumor or endometrioma. Some studies have found an association between an increased level of serum interleukin-6 and ovarian torsion although further research such as oxidative stress during ovarian torsion is needed.

Imaging studies are the most important when evaluating a pelvic mass. Ultrasonography is the first-line diagnostic assessment. A torsed ovary may be rounded and enlarged compared with the contralateral ovary, because of edema or vascular and lymph engorgement. An ultrasound can easily distinguish an ovarian mass by its components, location, density, Doppler flow, and size. There can be decreased or absent Doppler flow in the vessels of a torsed ovary. One prospective study reported that Doppler flow has high sensitivity and specificity; another retrospective study showed low sensitivity and high specificity in the diagnosis of ovarian torsion. It is not the gold standard for diagnosis, but it is a good tool. Two other studies suggested that a whirlpool sign is highly sensitive for ovary torsion. The whirlpool sign shows a twisted vascular pedicle, and a Doppler sonogram reveals circular vessels within the mass. However, further study on the diagnosis of ovarian torsion is necessary to determine the usefulness of this sign in ovary torsion.

Magnetic resonance imaging (MRI) is expensive but helpful in diagnosing ovarian torsion if findings on MRI can demonstrate the components of a mass in more detail than an ultrasound. Computed tomography (CT), however, is not typically used in ovary torsion because of radiation and density, but patients with acute abdominal or pelvic pain need to undergo CT to exclude diagnoses such as appendicitis, diverticulitis, and others. Finally, direct visualization is needed for a definitive diagnosis of ovary torsion. Hence, the diagnosis needs to be surgical proven for early rescue of ovary function.

The gold standard to treat ovary torsion is surgery, and this is also the only way to confirm the torsion. There are two surgical methods, laparoscopy and laparotomy. A laparoscopic approach has become a popular procedure. However, if cancer of the ovary or fallopian tube is suspected, a laparotomy should be done. While performing the surgery, it is necessary to assess ovarian viability and preserve its function. The only way to determine the viability of a torsed ovary during surgery is by gross visual inspection. In the conventional view of point, dark and enlarged ovaries may have vascular and lymphatic congestion, and may seem nonviable. However, multiple studies have suggested that even those black or blue-like ovaries may retain ovarian function following detorsion. Postoperative follow-up with ultrasound showed over 80% of patients had normal follicular development after detorsion. Animal study showed that there may not be total occlusion of the artery in ovarian torsion even with venous

and lymphatic congestion. In recent years, the mainstay of the treatment for ovarian torsion has been surgical evaluation and preserving ovarian function. There are many ways to perform the surgery and detorsion and ovarian conservation are almost always recommended now rather than salpingo-oophorectomy. An ovarian cystectomy is often performed for a benign ovarian mass. If malignancy is highly suspected, a salpingo-oophorectomy is needed. According to many observational studies, detorsion is associated with preserved ovarian function. The earlier the approach to torsion, the higher is the chance to preserve function. An animal study showed that necrosis might develop after occlusion of ovarian vessels for 36 h or longer. After the symptoms have developed, ovarian conservation reportedly decreases with time. No evidence suggests that detorsion increases adverse events postoperatively. Management in pregnant women is similar to that in nonpregnant patients, and laparoscopic surgery is safe for torsion in pregnant women. Neonates with ovarian torsion often present with irritability and the condition can be treated with laparoscopic surgery.

There is a risk of recurrence after detorsion, but the incidence and causes are unknown. According to recent research, several methods can be used to decrease the risk of recurrence. One method is suppression of ovarian cysts by oral contraceptives. Another method is an oophorectomy. However, both approaches lack long-term follow-up and systematic study.

4. Conclusion

Although the diagnosis of ovarian torsion is difficult and challenging, careful analysis of presenting symptoms (such as sudden onset of lower abdominal pain) is very critical. Pelvic ultrasonography can provide information on ovarian cysts. Once ovarian torsion is suspected, surgery is the mainstay of diagnosis and treatment. Ovarian cystectomy, oophorectomy, or conservative treatment with detorsion can be the treatment of choice.

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