

ADNEXAL TORSION IN A 7YR OLD GIRL; DILEMMA IN DIAGNOSIS AND TREATMENT: A CASE REPORT

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ABSTRACT

Ovarian torsion is an infrequent diagnosis in the paediatric age group but can be catastrophe especially if ovarian salvage is not possible. The clinical picture is nonspecific, and children cannot always articulate their symptoms, which often make the diagnosis a challenge. Because of its nonspecific manifestations, torsion has been confused with other conditions, such as appendicitis. Due to this cases often reported late, as in our case. A 7 yr old Fch presented with acute abdomen after two days. Imaging shows left adnexal mass with doubtful vascularity. So exploratory laparotomy followed by left salpingoopherectomy performed. We are reporting this case, as left sided ovarian torsion is a rare presentation of adnexal torsion in this age group.

Keywords: ovary, torsion, adnexal and tumour.

INTRODUCTION

Ovarian torsion is an infrequent diagnosis in the pediatric age group but can be catastrophe especially if ovarian salvage is not possible¹. The clinical picture is nonspecific, and children cannot always articulate their symptoms, which often make the diagnosis a challenge. Patients present with abdominal pain that has classically been described as intense and intermittent, is believed to result from the vascular occlusion. The only other consistent finding is a pelvic mass. Early diagnosis and high clinical suspicion are keys to prompt identification and definitive surgical treatment of this diagnostic dilemma. The most common cause of adnexal torsion is a benign cystic ovarian tumour.

When a cystic mass is present within the ovary acting as focal point about which the twisting may occur. It may however also occur in a normal ovary, particularly in young girls. Because of its nonspecific manifestations, torsion has been confused with other conditions, such as appendicitis. Ultrasonography is often used as a primary method of evaluation in this type of cases and showing the presence of multiple follicles, 8 to 12 mm in size, in the cortical portion of the enlarged ovary.¹¹. Doppler imaging may be used to evaluate blood flow to the organ and thus the viability of the

ovary. We are reporting a case of left sided ovarian torsion in a seven-year old girl which is very rare presentation of adnexal torsion in this age group.

THE CASE REPORT

Seven years old Fch presented in the emergency department with c/o pain abdomen associated with vomiting since last two days. Pain was continuous, moderate to severe in intensity without any special character localized mainly in the hypogastric region and associated with pyrexia. No any urinary or bowel complaints. Firstly seen by general practioner and treated symptomatically. When no improvement then she was referred to our institute where first seen by surgeon and shifted to our department when USG showing adnexal mass. On examination she was stable without any dehydration, afebrile, her pulse was 100/min, BP 110/70mmhg. On examination abdomen was soft, tenderness in the hypogastric region without any rigidity or muscle guarding.

No rebound tenderness. On per rectal examination irregular tender mass tipped in the pouch of douglas anteriorly. Her Hb 9.8gm%, TLC 14,400, Platelet count 2.92, RBS 76, Ur/Cr 37/.75, Na⁺/K⁺ 134.4/3.9. USG shows echogenic mass/lesion of size 5×5cm in the pelvis

posterior to bladder and anterior to rectum with doubtful peripheral vascularity on CDI with mild amount of free fluid in pelvis and RIF. Uterus, right ovary seen separately and appears normal, left ovary not visualised separately. CECT abdomen/pelvis shows a haemorrhagic mass in the pelvis between bladder and rectum with no visualization of left ovary. So possibility of haemorrhagic left ovarian mass/immature teratoma/yolk sac tumor kept. Tumour markers were: CA-125=4.64, AFP-1.20, bhCG-4.67 and LDH-1332.

Keeping the possibility of GCT she underwent exploratory laparotomy proceed left salpingoophrectomy. On laparotomy left ovary enlarged measuring around 5×5 cm with torsion, two turn around tube and mesovarian ligament with minimal free fluid. Uterus, right ovary and fallopian tube normal for her age [fig 1, 2]. Cut section shows solid ovarian mass with haemorrhagic necrosis and multiple follicles s/o normal ovarian tissue [fig 3]. Peritoneal washing shows no malignant cells. Her HPE report shows normal ovarian tissue with haemorrhage. Her post-operative period was uneventful and was discharged on 7th day.

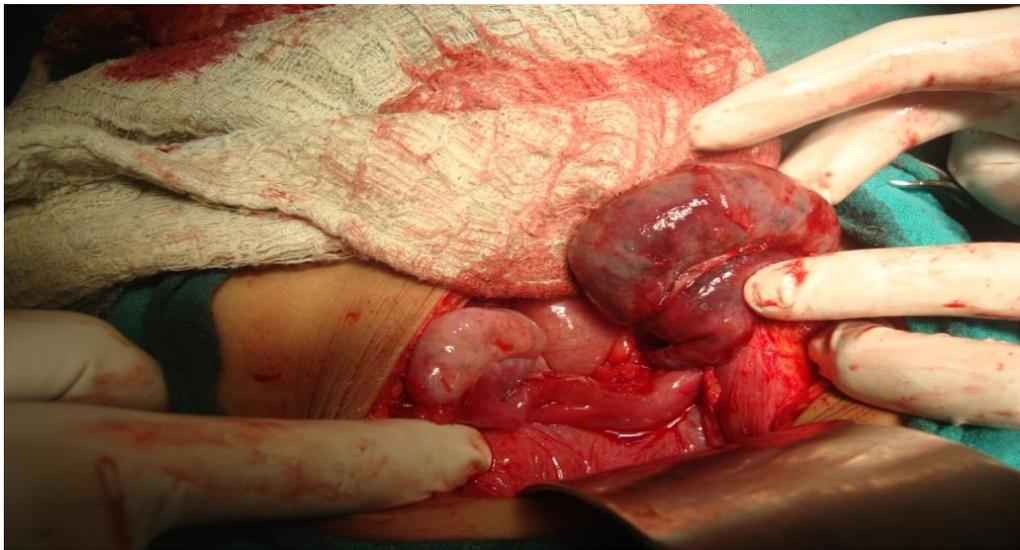


Figure 1: Torsion of Lt Ovary, Uterus, Rt ovary and Fallopian tube normal



Figure 2: Specimen of Lt Salpingoophrectomy



Figure 3: Cut section showing normal ovarian architecture with congestion.

DISCUSSION

Ovarian torsion is a rare problem within the paediatric population but unfortunately, it is not often considered initially when a patient presents with abdominal pain¹. Adnexal torsion occurs predominantly in women of reproductive age. Pregnant women have a greater risk of torsion of the adnexa than nonpregnant women (12% - 18% of ovarian torsion occurs during pregnancy). Ovarian torsion accounts for approximately 2.7% of all cases of acute abdominal pain in children^{3 4}. Adnexal torsion is often difficult to diagnose given the presence of nonspecific symptoms the presentation of adnexal torsion can mimic appendicitis, urinary tract infection, renal colic, gastroenteritis, or other conditions of acute abdominal and pelvic pain⁴.

Torsion occurs frequently (60%) on the right side presumably because the sigmoid colon leaves limited space for adnexal movement^{3 7}. Torsion is often associated with pre-existing ovarian pathology⁶ yet large cysts are thought to be less likely to undergo torsion secondarily to their size and mass. The diagnosis of ovarian torsion was supported by ultrasound (approximately 87% accurate for ovarian pathology⁸). While CT may be useful in diagnosing ovarian torsion^{9 10} its utility here was in discerning abdominal versus gynaecological pathology, for example, CT rule out appendicitis but did not rule out,

satisfactorily ovarian torsion secondary to an ovarian cyst.

Most authors have reported a low incidence of malignant adnexal tumour associated with adnexal torsion (<5%). In a study by Sommerville et al¹² over a 10 year period, 11% of patients with an ovarian neoplasm had adnexal torsion, 95% of these patients with torsion had benign ovarian neoplasm, 3% had neoplasm of low malignant potential and 2% had malignant ovarian neoplasm. The most common explanation for the lack of torsion in the group with malignant disease is that malignancy causes inflammation and decreased mobility of the adnexa due to adhesion formation and locally invasive tumour growth. The "classic" sonographic appearance is that of a unilaterally enlarged ovary with multiple follicles of uniform size, approximately 8-12 mm in diameter in the cortical portion of the ovary. A recent study by Albayram and Hamper postulated that these are earlier signs of torsion and may be obscured by necrosis. Doppler flow imaging is often quite useful in arriving at the correct diagnosis.

Typically no documented parenchymal perfusion will be seen in a completely torsed ovary. If either computed tomography (CT) or magnetic resonance imaging (MRI) are performed they may demonstrate a non-enhancing pelvic mass with engorged blood vessels that are straightened and drape around the ovarian

lesion. There is often a small amount of ascites.

Once adnexal torsion develops, immediate diagnosis and emergency surgery are necessary to preserve ovarian function⁶. However, the most frequent symptom of adnexal disease is usually an acute abdomen in which the main complaint is only nonspecific lower abdominal pain⁶. Furthermore, if the patient is a young girl, the probability of consultation with a gynaecologist from the beginning is low, and a significant delay in diagnosis and surgical treatment occurs more frequently than with adult patient. As a result, in most of such cases, adnexal necrosis progressed, and preservation of the adnexal tissue became difficult as with our patient also. To avoid such tragedy, accurate and immediate preoperative diagnosis is extremely important, especially in the case of a young girl. At present, a consensus has not been reached regarding whether there is a time limit after the onset of symptoms or what the intraoperative findings for adnexectomy should be^{3 7}. However, in our patient who

was treated 3 to 4 days after symptoms developed, the preservation of adnexal tissue was difficult and salpingoopherectomy was performed.

CONCLUSION

Prompt diagnosis and emergent surgical intervention are keys to ovary salvage, especially considering the sensitive nature of ovarian loss in the prepubescent patient. A misdiagnosis can have dire consequences including ovarian loss. Many surgeons recommended against detouring the ovary and prefer oophorectomy for concerns of embolization^{10 11} yet no strong evidence exists to support this claim¹. As demonstrated in this paper, ovarian torsion can occur at any age. Therefore a high index of suspicion coupled with radiographic evidence and clinical presentation will facilitate prompt diagnosis and ovarian salvage with significantly reduced patient co morbidity

CONFLICT OF INTEREST: None of the authors had no conflict of interest to declare.

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