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Case Report

A rare case of isolated fallopian tube torsion

Namrita Sandhu, Sanjay Singh*

Department of Obstetrics and Gynaecology, Army College of Medical Sciences, Delhi Cantt, Delhi, India

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***Correspondence:**

Dr. Sanjay Singh,

E-mail: drsanjaysingh@gmail.com

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ABSTRACT

Isolated torsion of fallopian tube is a rare occurrence. Diagnostic difficulty gets compounded in adolescents because the most commonly used imaging study in young, usually sexually inactive, population is transabdominal ultrasonography which may show normal ovaries, leading clinicians to abandon a diagnosis of adnexal torsion. Other imaging modalities such as CT scan or MRI are less useful for a rapid diagnosis because of the risk of radiation exposure, cost, or lack of ready availability. Delays in diagnosis may increase the likelihood of necrosis of the fallopian tube which would result in salpingectomy as was the case in our case report. Here authors present one such case, wherein one 12 year old girl who attained menarche at 10 years of age presented with acute paraumbilical pain and vomiting without any fever, bowel and bladder disturbances. On examination there was tenderness in right iliac fossa. Her USG report was unremarkable. She initially was put-on broad-spectrum antibiotics but without any amelioration of symptoms. Diagnosed as appendicitis by surgeon, she was taken up for laparoscopic appendicectomy. However, it turned out to be a case of fallopian tube torsion, wherein the tube had become gangrenous for which salpingectomy was done.

Keywords: Appendicitis, Fallopian tube, Laparoscopic resection, Pain abdomen, Torsion

INTRODUCTION

Fallopian tube torsion, though a rare condition almost always poses a diagnostic dilemma. It generally presents in a similar fashion to torsion of the ovary. Isolated fallopian tube torsion has an incidence reported to be 1 in 1.5 million in adult women; however, its occurrence in the paediatric or adolescent population is even less.^{1,2} Fallopian tube torsion is difficult to demonstrate radiographically as the ovary usually appears normal on ultrasound and a twisted tube may be easily missed.³ The presentation of these patients is not typically classic, thus, leading to a delay in diagnosis and a delay in surgical intervention which, often results in more advanced necrosis of the tube with the need for resection of the affected tube. Herein, authors present a rare case of

isolated fallopian tube torsion, in the adolescent age group, with an atypical presentation, who was treated laparoscopically.

CASE REPORT

A 12-year-old unmarried girl with no known comorbidities presented to the emergency with complaints of severe pain in the para umbilical region since 12 hours. Pain was associated with almost 5-6 episodes of vomiting. The pain started in the para umbilical region and finally localized to the right iliac fossa. It was sharp, non-colicky pain not relieved by rest. There was no history of loose stools, fever, and burning micturition. There was no history of trauma, cough, constipation, dysuria or obstipation. She attained

menarche at the age of 10. Her menstrual cycles were regular. Her LMP was about a week back.



Figure 1: Laparoscopic view suggesting isolated torsion of right fallopian tube on the mesosalpinx.

On examination her general condition was fair. Her vitals were stable. She was afebrile. There was no pallor. Her abdomen was soft. Mild tenderness was present in the right iliac fossa, however there was no rebound tenderness. Her bowel sounds were sluggish. Investigations revealed a Hb of 12 gm/dl, TLC was 14,000 and a normal differential leukocyte count. Her USG report was unremarkable however; mild probe tenderness was noted during ultrasound. Urine pregnancy test was negative.

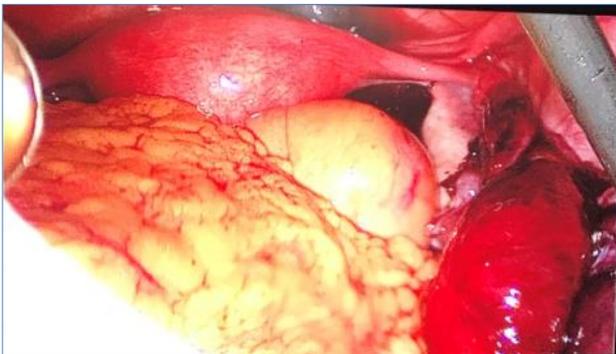


Figure 2: Laparoscopic view of fallopian tube showing its purplish discoloration, indicating gangrenous necrosis. Ovary is clearly visualized and is normal.

Patient was evaluated by the surgeons and was placed on conservative management with intravenous fluids, injection Ampicillin 500 mg intravenous 6 hourly and injection Gentamycin 60 mg intravenous 12 hourly. However, her pain abdomen increased over the next 6 hours. In view of her clinical presentation, negative UPT and tenderness at Mc Burnley's point, she was taken up for laparoscopy with a provisional diagnosis of acute appendicitis. On laparoscopy, the appendix looked normal. Her uterus and bilateral ovaries were unremarkable. However, the right tube looked oedematous and inflamed. It had undergone torsion on the mesosalpinx (Figure 1) and looked gangrenous in its

complete length. There was purplish discoloration of the tube, indicating necrosis (Figure 2). That's when the surgeons called for a Gynae opinion and after taking consent from the parents a right laparoscopic salpingectomy (Figure 3) was performed and the right tube was sent for histopathological examination. Post operatively her recovery was good and she was discharged on the 4th post op day.

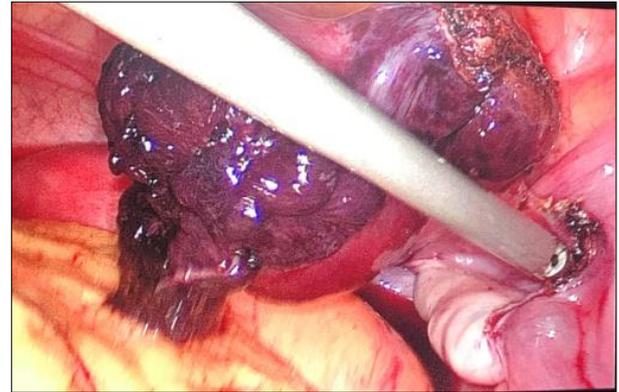


Figure 3: Laparoscopic view showing right salpingectomy.

Histopathological examination of the resected fallopian tube was hydrosalpinx with massive hemorrhage and necrosis of the subepithelial smooth muscle tissue.

DISCUSSION

Adnexal torsion is a common occurrence and is usually accompanied by ovarian tumors.⁴ However, torsion of isolated fallopian tube is extremely rare. The predilection age of fallopian tube torsion is 20-50 years and is assumed to occur more often on the right side due to anatomical differences.⁵

Isolated fallopian tube torsion is a rare cause of lower quadrant pain that primarily affects adolescents and ovulating women. Several risk factors for isolated fallopian tube torsion have been identified which include both intrinsic factors, referring to factors present within the tube, including pelvic inflammatory disease, hydrosalpinx, tubal ligation and tubal neoplasm; and extrinsic factors such as adhesions, adnexal venous congestion, adjacent ovarian or paraovarian masses, uterine masses, gravid uterus and trauma.⁶

Further, alterations in tube balance or rotation which can be associated either with hydrosalpinx or, even more rarely, with paratubal cysts such as hydatids of morgagni (HMs) have been described as an important cause of tubal torsion in literature.⁷ Mechanisms for fallopian tube torsion caused by HMs have been linked to entanglement of HM's pedicle with the fallopian tube or increases in heaviness of end of the tube caused by the HM's location at the fimbria.³ HMs are known to increase in size

because of secretory activity in puberty, which may lead to increases in the likelihood of tube rotation and torsion.³

In our patient, a note of the hydrosalpinx was made intraoperatively, which had undergone torsion. So, probably it was a case of isolated fallopian tube torsion due to intrinsic factor. Also, her presentation was similar to that of a case of acute abdomen which typically happens in Fallopian tube torsion cases, hence the dilemma, leading to a delay in diagnosis.

Clinically, differential diagnosis of a case of tubal torsion includes, ovarian torsion, rupture of the ovarian follicle (mittelschmerz) or cyst, appendicitis, ectopic pregnancy, pelvic inflammatory disease, intestinal obstruction or perforation, urolithiasis and cystitis.¹ Generally, these cases are missed on imaging as was the case with us.

Complications from tubal torsion include fallopian tube necrosis and gangrenous transformation, leading to an increased risk for superinfection and peritonitis.¹ Local necrosis can also result in irreversible damage to the ipsilateral ovary.⁸

Treatments options include surgical detorsion, salpingotomy and salpingectomy depending on the stage of intervention and presence of complications. As in our case, an early and per operative diagnosis was not possible and at the time of surgery, the tube was found to be gangrenous, it was thought prudent to perform a salpingectomy rather than adopting a more conservative approach

CONCLUSION

Isolated torsion of fallopian tube is a rare occurrence but must be kept in mind in the differential diagnosis of women with acute abdominal pain. Delays in diagnosis may increase the likelihood of necrosis of the fallopian tube which would result in salpingectomy as was the case in our case report. Hence, authors propose that the consideration of laparoscopy as a diagnostic tool for acute onset pelvic pain in the absence of ovarian pathology may be especially relevant in adolescent

females. Prompt recognition and intervention may allow for laparoscopic detorsion and cyst excision, rather than tube resection, which would help preserve fertility in this population.

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