

## Bilateral Torsion of Normal Adnexae – Report of Two Cases

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### Summary:

*Bilateral torsion of normal adnexae is very rare and occurs in children and in young women. Early diagnosis and early intervention by conservative surgery is essential to salvage ovarian function in these young women.*

*We reported here two cases of bilateral torsion of normal adnexae; one is asynchronous and another is synchronous. In case-1, recurrent torsion occurred in contralateral left*

*adnexa. Laparotomy followed by detorsion and ovariopexy (Fixation of the ovary in the lateral pelvic wall) was done in this case. In case-2, torsion occurred simultaneously in both adnexae. Left salpingoophorectomy and detorsion and ovariopexy of right adnexa were done in this case*

*Key words: Torsion of normal adnexae, Bilateral, Asynchronous, Synchronous.*

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### Introduction:

Adnexal torsion caused by twisting of vascular pedicle is 5<sup>th</sup> most common gynecological emergency & the incidence is 2.7%.<sup>1</sup> Right adnexae is more commonly involve than left & rarely it is bilateral.<sup>1, 2</sup> Ovarian enlargement, adnexal masses, ovulation induction, pregnancy and previous pelvic surgery are the common predisposing factor for torsion.<sup>1, 3</sup> But torsion can occur also in normal adnexae which is more common in children and young women<sup>4, 5</sup>. Bilateral torsion of normal adnexae, asynchronous & rarely synchronous was also reported. Diagnosis of torsion of normal adnexae is difficult. The clinical symptoms are often misleading and nonspecific. Sonography has an important role in the evaluation of adnexal torsion. Sonographic features vary according to the duration and degree of torsion and the presence or absence of an ovarian mass. In torsion of normal adnexae, helpful sonographic findings are; pelvic fluid, enlarged ovary with mixed echogenicity, enlarged ovary with multiple peripherally located follicles, a twisted vascular pedicle and the sonographic whirlpool sign.<sup>2, 5, 6, 7</sup> But none of these features are specific and detection rate varies from 46% to 74% in different studies. Transvaginal and color

Doppler sonography detecting the diminished or absent ovarian blood flow has role in diagnosis of ovarian torsion. However normal Doppler findings cannot exclude torsion.<sup>8</sup> MRI study is helpful in selected cases when the symptoms of torsion are subacute, chronic or recurrent in nature and when the diagnosis is not made with sonography and CT scan.<sup>3</sup> Until two decade ago, the standard approach to twisted adnexae was salpingoophorectomy because of concern that untwisting might precipitate pulmonary embolism from a thrombosed vein and there is theoretical risk of peritonitis and sepsis if the tissue undergone gangrenous. But several studies have subsequently shown that untwisting and conservative management can be performed with ovary salvaged without significant risk of embolism and the incidence of peritonitis and sepsis is not increased despite the necrotic appearance of the preserved tissues.<sup>9, 10</sup> Detorsion and preservation of adnexae now becomes the standard treatment replacing excision of adnexae. Laparoscopy is superior to laparotomy as route of surgery. Two rare cases of bilateral torsion of normal adnexa, one asynchronous and another synchronous are presented and discussed to make the physicians aware of the risk and to share the experiences.

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### Case Presentation

#### Case-1

A premenarchal girl aged 10 years admitted in a private hospital at Dhaka with left lower abdominal pain, nausea and vomiting. She had history of laparotomy and right salpingo-ophorectomy for twisted right ovary 3 months back in a private hospital at Sylhet district. After 3

months of her laparotomy she was readmitted in the same hospital with left lower abdominal pain and nausea. Immediate USG and other investigations showed no abnormality. Conservative treatment failed to relieve her pain. She was then referred to Dhaka. After admission at Dhaka, repeat USG showed enlarged left ovary with mixed echogenicity. Relaparotomy was done. The left adnexae was found twisted. The ovary was enlarged edematous and reddish black in colour. There was mild ascites. Detorsion and ovariopexy in the lateral pelvic wall was done. Post operative period was uneventful. She was followed up. 2 years later she developed menarche and USG showed normal left ovary with a follicular cyst indicating normal function of the ovary.

### Case-2

A young married girl aged 22 years, regularly menstruating, para-nil admitted in a private hospital at Savar, Dhaka with acute abdomen. She had severe lower abdominal pain, nausea, vomiting, low grade fever and abdominal distension. She was referred from a peripheral clinic where she had been treated conservatively for 48 hours without any improvement. Initial transabdominal USG done in previous clinic showed normal uterus and adnexa. Repeat transvaginal ultrasonography and Doppler imaging were done after admission. Both the ovaries were found hugely enlarged with mixed echogenicity and peripherally located enlarged follicular cyst. Doppler sonography showed almost absent blood flow. Laparotomy was done. Both the adnexa were found twisted. Ovaries were hugely enlarged, edematous and friable. Right ovary was reddish black in colour but the left ovary was yellowish and gangrenous. There was also huge ascitic fluid. Left adnexae was removed and right adnexae was untwisted and conserved. Postoperative recovery was uneventful. Six month later the patient reported with secondary amenorrhea. USG showed small right ovary without any follicle. Both features indicate ovarian failure.

### Discussion:

Torsion of normal adnexa is a rare condition and occurs commonly in premenarchal girl. In the present case-1 torsion of normal adnexae occurred in a premenarchal girl of 10 years age. Several other studies showed the increased incidence of normal adnexal torsion in

children and premenarchal adolescent which was 15-50% of all torsion cases.<sup>11, 12, 13</sup> In case-1, recurrence occurred in the remaining contra lateral normal adnexae and she had history of salpingoophorectomy in the first episode. Other studies also reported recurrence of torsions. Recurrence were common in normal adnexal twisting, affected either contra lateral or ipsilateral side, occurred mainly in children and adolescent and in cases where minimal and conservative surgery had done in first episode of torsion.<sup>9,14,15,16</sup> Regarding prevention of recurrence many author proposed ovariopexy to be done singly the unaffected ovary or bilaterally during the treatment of first episode and also in cases of recurrence when not done initially. Detorsion and bilateral ovariopexy during the first episode in the present case might salvage the ovary and prevent recurrence. But the effectiveness, safety and effect on future fertility of ovariopexy is yet to be determined by large scale study. Simultaneous bilateral torsion of normal adnexa as in case-2 is very rare. Few cases of simultaneous bilateral torsions are reported.<sup>17, 18</sup> Early diagnosis and early intervention is more urgent in these cases because delay may make these young women completely deficient in ovarian function. In our case-2, a young girl developed simultaneous bilateral torsion of her normal ovaries and it was very unfortunate that delay in intervention cause irreversible ovarian damage which could not be reversed by detorsion and conservation of one ovary. Clinical suspicion and transvaginal Doppler sonography might help in early diagnosis and intervention in that case. Clinical suspicion is most important because at early stage of torsion, no change may be evident in investigations. In both cases conservation of twisted ovary did not cause any postoperative problem justifying the safety of detorsion and conservation of twisted adnexa.

### Conclusion:

Two rare cases of bilateral torsion of normal adnexa are described. Early diagnosis and early intervention is very important for ovarian salvage in these cases. Physicians should be aware of this unusual risk. Conservative surgery by detorsion is the standard treatment of torsion normal adnexae despite the necrotic naked eye appearance of the ovary. Large scale study is needed to determine the effectiveness and safety of ovariopexy to prevent recurrence.

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