International Journal Dental and Medical Sciences Research
Volume 6, Issue 1, Jan-Feb 2024 pp 637-639 www.ijdmsrjournal.com ISSN: 2582-6018

Spontaneousbilateral Synchronous Ovarian Torsion in Normalovaries: A Case Report.

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Submitted: 20-02-2024 Accepted: 02-03-2024

ABSTRACT: We describe a rare case of a spontaneous bilateral ovarian torsion in normal ovaries in a young 19 year female with acute pain abdomen. The diagnosis was suggested on ultrasonography with color Doppler imaging followed by plain MRI of the pelvis. The findings were confirmed by surgery with oophorectomy on left side and wedge decompression and plication of right ovary.We discuss the etiology and treatment options of the above condition.

KEY WORDS: Ovarian torsion, ultrasonography, ovarian plication, ovarian edema

I. INTRODUCTION:

Acute pain in the lower abdomen in a young female has many cases and ovarian torsion forms the fifth most common cause (1). Only few cases of spontaneous synchronous and metachronous bilateral ovarian torsions have been described in literature (2-5). Out of these only two cases have been described of bilateral synchronous ovarian torsion in non-pathological ovaries(6).The diagnosis is not only very challenging but also has clinical relevance due to timely diagnosis and surgical plan so as to salvage the ischemic ovaries which may have a bearing on the future fertility of the patient. We describe one such case of young patient with acute pain abdomen with spontaneous bilateral synchronous ovarian torsion in normal ovaries and discuss the management plan.

II. CASE REPORT:

A 19 year old female presented to us with complaints of acute non radiating pain in lower abdomen since last 3 days. The pain was colicky and was accompanied by vomiting. There was neither history of fever nor any history of menstrual irregularity. The hematological profile along with hormonal levels,gravindex test and Ca-125 were normal. A routine ultrasound of the abdomen was performed;en done which showed bilateral enlarged ovaries with peripheral distribution of small ovarian follicles. The mean ovarian volume was 40 cm3 and 35 cm3 on left and right side respectively with small pelvic free fluid. The color Doppler examination showed reduced ovarian arterial flow with swollen right tube with proximal hyperemia (Figure 1A-B). A Plain MRI of the pelvis revealed similar findings with areas of hemorrhage in the left ovarian stroma(Figure 2A-D). After informed consent the patient underwent open laparotomy which revealed torsion of bilateral adnexia with a bluish-colored left ovary with a large linear tear of the capsule, whereas the right ovary was enlarged in size and showed pink color (Figure3 A-B). Left oophorectomy was done while wedge resection of left ovarian stroma was done followed by plication of the left utero ovarian ligament and the patient was advised regular follow up evaluation**.**

III. DISCUSSION:

Our case describes the rarity of condition and the challenge thereby in the diagnosis. The condition of a spontaneous synchronous ovarian torsion is very rare and only three cases have been described in literature so far (2, 3, 6). The first purpose of the case report is to apprise the readers of the presence of such a situation which has both short and long term fertility implications and needs immediate intervention to prevent permanent ovarian loss. We then discuss the etiology and management plan. The etiology of ovarian torsion can be discussed as those with primary torsion and secondary torsion due to an underlying lesion or cause. For pimary ovarian torsion no definite etiology has been proposed as the cause of spontaneous ovarian torsion although many cases of ovarian torsion patients had on surgical evaluation had long ovarian ligaments, lax pelvic floor muscles and with sudden change in the abdominal pressure lead to torsion of ovaries (1). Right side ovaries are also known to predispose to ovarian edema, stromal hyperplasia and eventually

torsion due to unique anatomy of right ovarian vein which has a higher pressure than left side vessel and a syndrome of massive ovarian edema (MOE) has also been described (7-8). Secondary ovarian torsion can be due to underlying large cysts usually hemorrhagic, dermoid cyst or a cyst adenoma. Further ovarian torsion can be partial or complete depending upon complete occlusion of arterial supply to ovary or partial due to venous or lymphatic occlusion only. From timeline view point bilateral ovarian torsion can be asynchronous or sequential (9) or even rarer synchronous bilateral as in this case. Ultrasound is the imaging of choice in the detection of the condition and the radiologist must be aware of this entity and caution the surgeon for bilateral nature of disease even though it being rare. Ultrasound shows a classic diffusely enlarged ovary usually in midline position with echogenic stroma and peripherally placed small follicles with the color Doppler showing reduced or absent arterial flow (9-10). Doppler has been shown to have high specificity but low sensitivity and in one series 60% of cases of ovarian torsion had normal Doppler (11).In cases where in doubt further evaluation can be done using plain magnetic resonance imaging which shows areas of hemorrhagic necrosis seen as T2 signal changes of reduced signal intensity as was seen in the present case.

There are also controversial views on the management aspects with more focus being laid on the preservation of ovarian tissue even if the ovaries appear blue. In the present case with capsular tear and hemorrhagic necrosis oophorectomy was opted. Conservation of ovaries is the preferred approach in viable ovaries and involves per-operative untwisting and oophoropexy with plication of utero-ovarian ligament (12) and the same was done for the right ovary. Even after successful surgical treatment there is a 11% risk of either sequential or a repeated ovarian torsion, and such patients require regular follow-up examinations (13).

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LEGENDS AND FIGURES

Figure 1A) Transverse sonogram view of the right iliac fossa with thickened hypervascular pedicle with enlarged right ovarian stroma. B) Midline enlarged left ovary with absent flow.

Figure 2A-D

A.B Plain coronary FISP T2WI images showing enlarged hyperintense swollen right ovary and left ovary with latter having areas of hemorrhage. C,D: T2WI axial plain MRI images showing same.

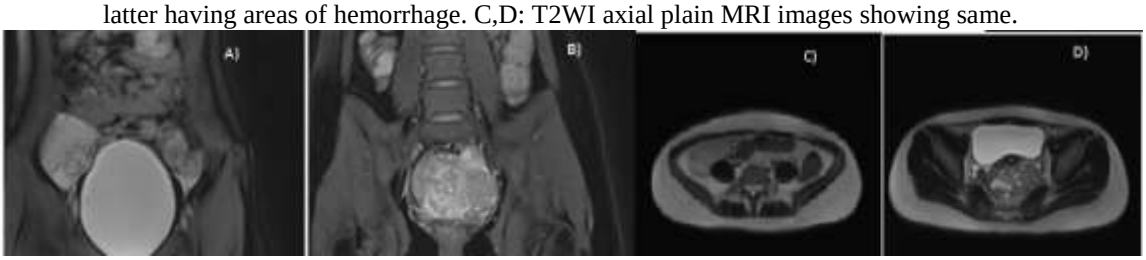

FIGURE 3A,B

Peroperative images A) Swollen torsed right ovary and right fallopian tube B) Gangrenous bluish left ovary with a large capsular tear.