

## A Rare Case of Left Undescended Ovary with Right Adnexal Torsion in a Young Girl with Unicornuate Uterus

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### Abstract

With the advent of laparoscopy many in gynecological practice many rare cases are being diagnosed nowadays. Hereby we are presenting a rarest case that we came across while at laparoscopy. A case of right adnexal torsion with left undescended ovary with unicornuate uterus in a 16 year young girl. As we all know adnexal torsion is 5<sup>th</sup> most common gynaecological emergency. Coming to undescended ovaries its prevalence is about 0.3 to 2%.

**Keywords:** *Left Undescended Ovary; Right Adnexal Torsion; Young Girl; Unicornuate Uterus*

### Background and Case Report

A 16 year girl presented to emergency department with lower abdominal pain since 10 days with increase in severity. Since 1 day she is feeling nauseating and 2 episode of vomiting a day back. Her last menstrual periods were 45 days back as it were irregular. She does not have any major medical or surgical illness with no known allergies. No history of fever. Patient was examined on general examination no significant abnormal finding detected and on per abdominal examination there was no guarding but minimal tenderness present. Patients routine blood reports ordered and sonography done.

### Findings as below:

- Blood group- B RH positive
- Hemoglobin- 10.4
- TBC- 10900
- Platelets- 201
- CA 125- 40.39.

### Ultrasonography- 15/02/24

Uterus normal size/ET-3.7mm/Right ovary normal. 2 cystic lesions with thick wall noted in left adnexa of size 6 x 6 cm and 3.2 x 4.2 cm. Minimal peripheral vascularity noted with left adnexa showing Whirlpool signs colour doppler suggesting left sided torsion with large ovarian cyst with minimal free fluid.

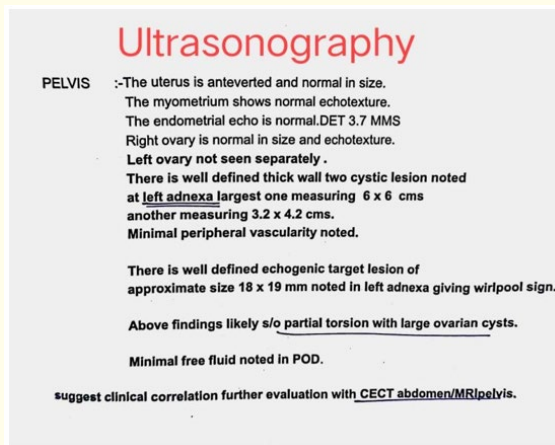
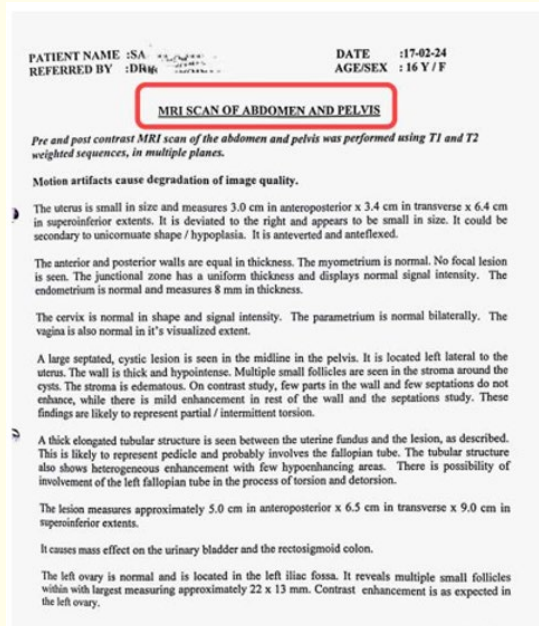


Figure 1

Patient was advised admission after sonography report with management options discussed with parents as detorsion, detorsion + oophoropexy, salpingo-oophorectomy, ovarian cystectomy. They were explained about expectant management and surgical options with its advantages, risks involved and complications that may arise during or after surgery. They were not ready for admission as her exams are approaching. As patient is having abdominal tenderness and as suggested by monologist patient was advised to get MRI pelvis done.

MRI pelvis 17/02/2024 and it showed small sized uterus with possibility of hypoplastic/unicornuate uterus. And left sided ovary is located in left iliac fossa revealing multiple follicles largest being 22 x 13 mm. A thick hypo-intense band is seen contiguous to left over and anterior to external iliac vessels with renal anomalies detected.



**IMPRESSION:**

MR scan reveals,

- Small size of the uterus with possibility of unicornuate uterus/ hypoplasia.
- A large septated cystic lesion in the midline, left lateral to the uterus, likely to represent enlarged right ovary. Possibility of partial / intermittent torsion of the ovary with detorsion can be considered, in view of the morphology. A pedicle is seen and probably involves the fallopian tube and is also likely to be involved in the torsion. The right ovary is displaced left lateral to the uterus, as result of twisting.
- A small, enhancing T2 hypointense structure inferomedial to the left ovary, of questionable significance.
- Mild free fluid in the pelvis.

*Clinical correlation is recommended.*

Figure 2

As there was no pain relief patient was posted for diagnostic laparoscopy and the intra operatively to our surprise there was large right adnexal torsion having to turns around its pedicle and unicornuate uterus with left sided ovary seen at psoas muscle and only fibril attachments to ovarian surface with tube being absent.

Laparoscopic detorsion and ovarian cystectomy done. During laparoscopy ovary and fallopian tube is getting rotated again so we have decided to do oophoropexy using “HOT DOG IN BUN” technique. Homeostasis was achieved and patient withstood operation well.

**OPERATIVE NOTES :**  
 Pt 4 GrA, Lithotomy Position given, Parts P & D, Bladder Emptied \_\_\_\_\_  
 EUA Ps \_\_\_\_\_ PV \_\_\_\_\_  
 Potts Total No. 4 10mmx \_\_\_\_\_ umbilical / supraumbilical 5mm x 2 (LT) upper / lower quadrant  
 \_\_\_\_\_ (RT) upper / lower quadrant

**LAPAROSCOPY :**  
 Uterus Size, Shape, Mobility unicornuate uterus.  
 Tubes Size, Shape, Mobility RT Adnexal torsion  
 Ovaries Size, Shape, Mobility \_\_\_\_\_ (Follicles / CL) \_\_\_\_\_  
 POD : RIGHT Ovarian 4.5x 10cm 2  
Tubal torsion.

TB / Endometriosis / Adhesions \_\_\_\_\_  
 APPENDIX / Liver / GB detorsion done. cystectomy  
done.  
 HYSTEROSCOPY :  
 Endometrial Cavity : Size, Shpae, Volume \_\_\_\_\_  
 Endometrium \_\_\_\_\_  
 Ostia \_\_\_\_\_ Polyp / Fibroid / adhesions \_\_\_\_\_  
 Cervical Findings : \_\_\_\_\_  
 • uterovaginal ligament

PROCEDURE : \_\_\_\_\_  
plication done using  
hot dog in bun technique.

• LF ovary in psoas muscle.  
isolated. no connection of  
ovary to uterus.

• RT uterovaginal plication done.  
using hot dog in bun. Hemostasis  
achieved. ports removed. skin closed  
breeding given. pt withstood operation well.

Infra-op medication \_\_\_\_\_ given  
 Procedure Time \_\_\_\_\_ 1hr 30min  
 Condition of Pt. Infra-Op/Post-Op \_\_\_\_\_ stable  
 Advice on Discharge \_\_\_\_\_ ambulation as pt

POSTERIOR VIEW  
 LT RT  
 UNICORNUTE UTERUS  
 RT TORSION

LT  
 UNICORNUTE  
 RT  
 Ovary on external mass.

R  
 DR. SACHIN V. NAIKNAWARE

Figure 3

### Intra operative pictures

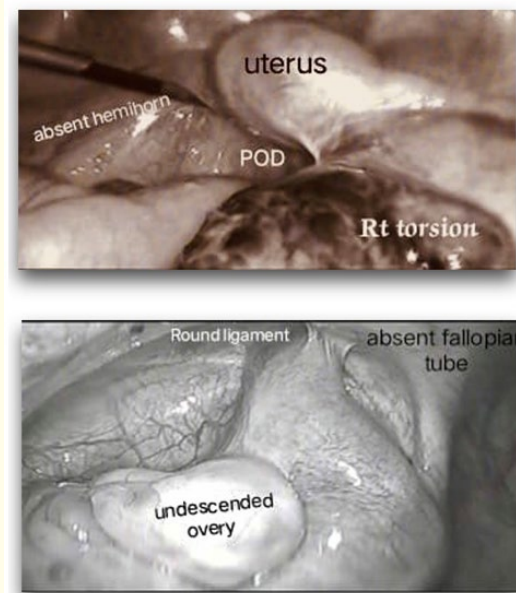


Figure 4

### Discussion

Ovarian maldescent or ectopic ovaries is a rare embryological malformation. Undescended ovaries were classified by Lachman and Berman in 1991 as:

1. Post surgical implants
2. post inflammatory implants
3. True ectopic ovarian tissue.

Maldescended ovaries have a very low incidence ranging between 0.3 - 0.5% and its prevalence increases in women with unicornuate uterus. They can be unilateral or bilateral and their low incidence may be due to under diagnosis as most cases are diagnosed during laparoscopy or by MRI, advantages of MRI are:

1. Non invasive, highly sensitive and specific.
2. Concurrent diagnosis of renal anomalies.
3. Easy follow up.

Agenesis of unilateral adnexal as a rare entity and rarest if there is unilateral adnexal torsion and contralateral undescended ovary. Paediatric ovarian torsions are a rare condition with a prevalence between 1 - 20 years of age is 0.005% as compared to 2.5 to 7.5% in the adult population. Torsion is more commonly associated with müllerian anomalies. Ovarian torsion in young girls is associated with elongated utero-ovarian ligament, congested or hypertrophic ovary and sudden rise in intra-abdominal pressure.

The anomaly of ovarian and fallopian maldescent are more commonly seen in combination with uterine anomalies as upto 42% with a unicornuate uterus.

The link between undescended ovaries and unicornuate uterus is well known but the undescended ovaries are infrequently reported. These undescended ovaries known to cause menstrual irregularities, infertility and abdominal pain.

Renal agenesis with unicornuate uterus can also be a part of MRKH-syndrome. It is necessary to do renal function tests, presence of kidney and their location by IVP in patients with ectopic or maldescended ovaries. Since undescended testis is a risk factor for gonadal tumor formation, undescended female gonads may as well have a higher risk for tumor development.

If adnexal torsion is suspected timely intervention by diagnostic laparoscopy is indicated to preserve ovarian function and future fertility as at present there is no clinical or imaging criteria sufficient to confirm the preoperative diagnosis of adnexal torsion so a minimal invasive approach is recommended with detorsion and preservation of adnexal structure regardless of appearance of ovary [1-9].

### Conclusion

1. There is well known association of unicornuate uterus with ovarian and fallopian tube maldevelopment.
2. Sonography alone may not diagnose the site of adnexal torsion if the cyst is big enough, in such cases MRI need to be done to conform the diagnosis.
3. There should be low threshold for diagnostic laparoscopy.
4. Normal doppler flow has been noted in upto 60% of adnexal torsion cases, so it is important to keep adnexal torsion as differential diagnosis even with USG documented colour flow.
5. Ideal treatment for adnexal torsion is detorsion with without oophoropexy.
6. Dr Sachin's criteria for adnexal torsion management can be followed in cases of adnexal torsion for standardisation of treatment, for future comparisons and for recurrence prevention.
7. HOT DOG IN BUN technique is a technique of oophoropexy used to prevent the recurrence of torsion and in cases of premenarchal girls whereby utero-ovarian ligament is plicated to round ligament by going through the mesosalpinx of fallopian tube where bun represent the round ligament on one side and utero-ovarian ligament on other side keeping the fallopian tube cushioned in between so that there is no trauma to the fallopian tube.

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