

# Torsion of an Ovarian Cyst in Pregnancy

**BELLO S<sup>1</sup>, TUNAU K<sup>1</sup>, BELLO B<sup>2</sup>, ABDULLAHI K<sup>3</sup>, UGEGE B<sup>1</sup>, UKWU E<sup>1</sup>**

Department of <sup>1</sup>Obstetrics and Gynaecology, <sup>2</sup>Surgery and <sup>3</sup>Pathology, Usmanu Dan Fodiyo University Teaching Hospital Sokoto, Nigeria

## ABSTRACT

Torsion of the ovary is the partial or total rotation of the ovary over its pedicle. It is unusual for it to occur in the second trimester. We report a case of a 35-year old G10P9+0A7 at 17 weeks gestation who presented with acute severe abdominal pain. She was found to have an ovarian cyst in pregnancy. She had Exploratory Laparotomy where a huge gangrenous cyst was found and Salpingoophorectomy was performed. The pregnancy continued without any problems. The histology report showed a Simple Cyst.

**Key words:** Torsion, Ovarian Cyst, Pregnancy

## Introduction

Axial rotation of the ovary is found in about 10–15% of cases of operations.<sup>[1]</sup> The risk of ovarian torsion rises by 5-fold during pregnancy and the incidence is 5 per 10,000 pregnancies.<sup>[2]</sup> Torsion occurs predominantly in the reproductive age group. Predisposing factors include pregnancy, moderate size and weight, free mobility, and long pedicle.

## Case History

A 35-year-old unbooked G<sub>10</sub>P<sub>9</sub>+<sup>0</sup>A<sub>7</sub> at 17 weeks gestation who presented to Gynaecological Emergency Clinic of UDUTH with 3 h history of abdominal pain. The pain started in the left iliac fossa and later became generalized. It was sharp in nature and severe. There was no relieving factor but it was aggravated by movement. There was no history of vaginal bleeding nor drainage of liquor. There was associated vomiting. There were no other abdominal, cardiopulmonary, or urinary symptoms.

On examination, she was in painful distress, not pale and afebrile. Her pulse rate was 78 beats per minute and her blood pressure 120/80 mmHg. An abdominal examination revealed a uniformly enlarged abdomen with left hypochondrial tenderness. There was a tender left hypochondrial mass which made further examination difficult. The uterus was 18 weeks' size. Vaginal examination revealed posterior cervix, 2-cm long and the os was closed. Further examination was suspended due to tenderness.

All her blood and urine investigations were within normal limits. An abdominopelvic ultrasound revealed a large well-marginated round complex mass measuring 14 cm in diameter in the left hypochondrial region extending inferiorly into the pelvis. The mass had some cystic components in its

**Address for correspondence:** Dr. S. Bello,  
Department of Obstetrics and Gynaecology, Usmanu  
Danfodiyo University Teaching Hospital Sokoto, Nigeria.  
E-mail: drsbello2007@gmail.com

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

**For reprints contact:** WKHLRPMedknow\_reprints@wolterskluwer.com

**How to cite this article:** Bello S, Tunau K, Bello B, Abdullahi K, Ugege B, Ukwu E. Torsion of an ovarian cyst in pregnancy. Trop J Obstet Gynaecol 2020;37:189-91.

**Received:** 16-08-2019      **Accepted:** 25-03-2020  
**Published Online:** 14-08-2020

Access this article online	
<b>Website:</b> www.tjogonline.com	<b>Quick Response Code</b> 
<b>DOI:</b> 10.4103/TJOG.TJOG_83_19	



Figure 1: The ovarian cyst before excision



Figure 2: The cyst after performing salpingo-oophorectomy

anterior aspect. The liver and both kidneys were normal in size and of uniform parenchymal echotexture. There were no ascites. There was a singleton live fetus in a longitudinal lie, cephalic presentation, adequate liquor, and posterofundal placentation at 18 weeks 5 days.

Intraoperative findings revealed a huge left tubo ovarian mass which was cystic, gangrenous and measuring 22cm by 22cm as shown in Figure 1. The stalk of the cyst including the fallopian tube had rotated 3 times. The cyst had a smooth surface and the capsule was intact. The right ovary, right fallopian tube and other abdominal organs were grossly normal. There was an intact gravid uterus about 18 weeks size. With the provisional diagnosis of twisted ovarian cyst in pregnancy, Exploratory Laparotomy with left salpingo-oophorectomy was performed as shown in Figure 2. Her post operative period was uneventful until she was discharged. Histology report showed a simple cyst.

## Discussion

The incidental finding of an adnexal mass in pregnancy has become more common with the routine use of ultrasonography. As many as 1–4% of pregnant women are diagnosed with an adnexal mass. The majority of the masses are functional or corpus luteum cysts and spontaneously resolve by 16 weeks gestation. Pathologic ovarian neoplasms tend not to resolve and the most common found in pregnancy are benign cystic teratoma (21%), serous cystadenoma (21%), cystic corpus luteum (18%), and mucinous cystadenoma. Of the adnexal masses that persist, 1–10% will be malignant.<sup>[3]</sup>

Torsion of the adnexa can involve the ovary, tube, and ancillary structures either separately or together. It occurs commonly in the first and second trimesters precisely between 6 and 14 weeks and rarely in the third trimester.<sup>[3,4]</sup>

Cysts less than 6 cm in diameter and appearing benign on ultrasound are generally treated conservatively as they may undergo spontaneous resolution. Cysts more than 10 cm in size are usually resected due to increased risk of malignancy, rupture, or torsion. Management of cysts between 5 and 10 cm is controversial.<sup>[4]</sup> If the cysts contain septae, nodules, papillary excrescences, or solid components then resection is recommended. Those with simple cystic appearance may be managed expectantly with serial ultrasound surveillance. However, they may require emergency exploratory laparotomy for rupture, torsion, or infarction in as many as 50% of cases.<sup>[5]</sup> It is estimated that only approximately 2% of cysts will rupture in pregnancy and the incidence of torsion is 0–7%.<sup>[3]</sup> The challenge to the clinician is to weigh for each individual patient the benefits against the risks of surgery during pregnancy including miscarriage, rupture of membranes, and preterm labor.

Complications of the cysts associated with pregnancy are torsion, rupture, infection, malignancy, impaction of cyst in the pelvis causing retention of urine, obstructed labor, and malpresentation of the fetus. Previously untwisting of the pedicle was avoided to prevent emboli and toxic substances related to hypoxia from entering peripheral circulation, but recently, reestablishing ovarian circulation by untwisting has shown to result in viable ovarian tissue with no systemic complications.

In conclusion, ovarian torsion is relatively uncommon in pregnancy. It usually presents with an acute abdomen. Prompt operation is necessary to prevent complications such as tissue necrosis, shock, and peritonitis.

## Financial support and sponsorship

None.

### Conflicts of interest

There are no conflicts of interest.

### References

1. Dutta DC. Benign Lesions of the Ovary. In: Konar H (ed) Textbook of Gynaecology. 5<sup>th</sup>. New Central Book Agency Kolkata; 2009. p. 279-92.
2. Ventolini G, Hunter L, Drollinger D, Hurd WW. Ovarian torsion during pregnancy. [http : //www.residentandstaff.com/issues/articles/2005-09-04.aspn](http://www.residentandstaff.com/issues/articles/2005-09-04.aspn).
3. Christine HH. Surgical Diseases and Disorders in Pregnancy. In : Decherney AH, Nathan L, Goodwin TM, Laufer N (eds). Current Diagnosis and Treatment Obstetrics and Gynaecology. 10<sup>th</sup> ed. McGraw Hill Medical Publishing Division Newyork; 2007. p. 417-31.
4. Vasavi K, Rekha G, Vellanki V, Gururaj D. Torsion of Ovarian cyst during pregnancy: A case report. *Cases J.* 2009; 2: 9405.
5. Lee CH, Raman S, Sivanesaratnam V. Torsion of ovarian tumours: A clinicopathological study. *Int J Gynaecol Obstet* 1989;28:21-5.