

DOI: <https://dx.doi.org/10.18203/2320-1770.ijrcog20251252>

Case Report

A missed diagnosis of ovarian torsion in a patient with multiple degenerating uterine fibroids: a case report

Love C. Okafor^{1*}, Nwakamma C. Ogoke¹, Kingsley I. Iseko², Aminyene E. Meraiyeibu²,
Simon J. Adagadzu³, Chinenye Ukoha⁴

¹Department of Obstetrics and Gynaecology, The Limi Hospitals, Abuja, Nigeria

²Department of Radiology, The Limi Hospitals, Abuja, Nigeria

³Department of Anaesthesia, The Limi Hospitals, Abuja, Nigeria

⁴Department of Family Medicine, The Limi Hospitals, Abuja, Nigeria

Received: 27 January 2025

Revised: 10 March 2025

Accepted: 11 March 2025

*Correspondence:

Dr. Love C. Okafor,

E-mail: okaforlove@yahoo.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

The presentation of ovarian torsion can be dramatic with most patients presenting with acute or severe nonspecific lower abdominal and pelvic pain, either intermittent or continuous, with nausea and vomiting. The diverse clinical presentation is one major reason the diagnosis of ovarian torsion is frequently missed. The incidence of ovarian torsion ranges from 3-10% and ovarian cyst accidents constitutes about 3-5% of gynaecological emergencies. The aim was to document a case of acute abdomen suspected to be acute red degeneration of fibroids and/or acute appendicitis with incidental finding of ovarian cyst accident with consequent loss of the ovary. Our patient is a 35-year-old lady who presented with lower abdominal swelling, right sided abdominal pain and vomiting, suspected to be acute appendicitis and/or red degeneration of uterine fibroids but subsequently had exploratory laparotomy with right salpingo-oophorectomy due to right ovarian torsion, alongside myomectomy and appendectomy. Ovarian torsion is a preventable incident if early diagnosis and intervention is made. There is therefore need to consider ovarian torsion as a differential diagnosis of acute abdomen in young females to avoid loss of ovary and its function.

Keywords: Ovarian, Torsion, Cyst, Accident, Degenerating, Uterine fibroids, Diagnosis, Ovarian torsion

INTRODUCTION

Ovarian torsion is a condition that occurs when there is a partial or complete twisting of the ovary around its ligamentous support. If it is left untreated, there is interruption of blood and lymphatic supply to the ovary and the fallopian tube resulting in infarction and loss of function.^{1,2}

Studies have shown that ovarian lesion in the reproductive age groups are often benign, however evidences have also been made of malignant ones. The most common adnexal mass associated with ovarian torsion is an ovarian dermoid cyst.^{1,3}

The incidence of ovarian torsion ranges from 3-10% and ovarian cyst accidents constitutes about 3-5% of gynaecological emergencies.⁴⁻⁶ The incidence of ovarian torsion is higher in younger women (15-30 years) and postmenopausal women. Approximately 20% occur in pregnancy.⁴⁻⁷

The risk factors for ovarian torsion include hypermobility of the ovary due to increased length of ovarian ligament, enlarged corpus luteum in pregnancy, presence of ovarian mass/cyst, and ovarian mass over 5 cm.^{1,2,4,5,7}

The presentation of ovarian torsion can be dramatic with most patients presenting with acute or severe nonspecific

lower abdominal and pelvic pain, either intermittent or continuous, with nausea and vomiting. There is lower abdominal tenderness, adnexal tenderness and raised white cell count is common.²

Accuracy of ultrasound in diagnosis of ovarian torsion remains controversial, with some studies reporting correct diagnosis in only 23% to 66% of cases.⁸ Normal Doppler flow does not necessarily exclude an ovarian torsion; in fact, it may lead to missing the diagnosis and has been shown to delay management. Gilal quoted sensitivity of 70% and specificity of 87% in ultrasound diagnosis of ovarian torsion. Use of computed tomography (CT) scan and magnetic resonance imaging (MRI) is variable.^{1,2,7,9}

Management of ovarian torsion involves urgent surgical intervention to prevent tubo-ovarian necrosis or infarction and loss of ovarian function. The choice of treatment will be determined by the skill of the physician, availability of resources, size and number of lesion among other factors.⁴ Here, we present a case of acute abdomen suspected to be red degeneration of fibroids and/or acute appendicitis with incidental finding of ovarian cyst accident with consequent loss of the ovary.

CASE REPORT

A 35-year-old nullipara came to our gynaecology emergency complaining of lower abdominal swelling of one-year duration and intermittent lower abdominal pain of 2-days duration. The swelling was increasing in size, painless and associated with early satiety. No symptoms of urinary tract infection and her menstrual cycle has been regular. There was no personal or family history of gynaecological problem.

On examination, she was clinically stable. Her pelvic examination showed mild pelvic tenderness and abdominal examination revealed suprapubic fullness and the uterus was about 24-weeks size, firm, nodular and mobile. Routine blood tests including inflammatory markers were normal, pelvic ultrasound revealed bulky anteverted uterus, enlarged, seen extending to the umbilical region of the abdominal cavity and measures 11.61 cm in its AP diameter. The endometrium is about 12.7 mm thick. Myometrium showed multiple (>10) uterine fibroids of varying sizes including 8.35×6.86 cm (posterofundal pendunculated), 5.15×3.74 cm (anterior intramural), 4.41×4.01 cm (posterior subserous) in largest diameter. The cervix is closed. No fluid seen in the cul de sac. Both ovaries/adnexae were not visualized.

We made an assessment of symptomatic uterine fibroids and counselled her for myomectomy but she wanted it after her wedding. She was rehydrated and discharged with analgesics.

Two months later, she represented with complaints of right sided sharp, intermittent lower abdominal pain of 3-days duration associated with four episodes of vomiting few

hours prior to presentation. The vomiting was non-projectile, not bloody or bilious. There was no fever, headaches or change in bowel habit. Her medical and surgical history were not significant.

Her pulse rate was 85 b/m, blood pressure (BP) 119/77 mmHg, oxygen saturation 98%, respiratory rate 24 c/m, temperature 36.4 and random blood sugar 6.8 mmol/l. Abdominal examination revealed suprapubic fullness with multiple nodular uterine fibroids. There was tenderness at McBurney's point and pointing sign was positive. Pregnancy test was negative. White cell count was normal, platelet was normal, packed cell volume was 35%, and neutrophils was 80.3%. Her kidney function test was within normal range. The abdominal ultrasound was essentially normal while pelvic ultrasound showed enlarged uterus with multiple uterine fibroids.

We made an assessment of symptomatic uterine fibroids (red degeneration of uterine fibroids) and/or acute appendicitis. After due consent for myomectomy and appendectomy, she was worked up for exploratory laparotomy. Intraoperatively, we saw the appendix was healthy looking; right ovary was tort, inflamed and gangrenous; Inflamed, edematous and gangrenous right fallopian tube and multiple uterine fibroids at different stages of degeneration. Right salpingo-oophorectomy was done alongside myomectomy and appendectomy. There were no intraoperative complications. She was transfused two units of blood.

Histological examination showed tubo-ovarian- sections show tubo-ovarian tissue with extensive areas of infarction and inflammatory infiltrates including neutrophils, eosinophils and lymphocytes (diagnosis- infarcted tubo-ovarian tissue) and myoma-sections show a hyalinised mesenchymal tumors composed of nodules of interlacing fascicles of smooth muscle fibers. These cells have round to ovoid nuclei and are surrounded by variable amounts of connective tissue stroma. Extensive areas of necrosis, hyalinization and calcifications are present (diagnosis- degenerating leiomyoma uteri).



Figure 1: Ovarian torsion.



Figure 2: Myometrium showed multiple (>10) uterine fibroids of varying sizes

She was discharged on third postoperative day and subsequent follow up at the gynaecology clinic were uneventful. She has had her menstrual period, was doing well and had done her wedding. Repeat pelvic ultrasound showed normal left ovary.

DISCUSSION

The diverse clinical presentation is one major reason the diagnosis of ovarian torsion is frequently missed.⁶ The majority of patients with ovarian torsion present with sudden onset, severe persistent lower abdominal/pelvic pain, often associated with nausea and vomiting. About 25% of patients experience bilateral lower quadrant pain. Patients with intermittent ovarian torsion have a more prolonged time course, typically presenting for evaluation 1 to 3 days after the onset of symptoms.^{2,6,7} Our patient presented with non-specific pelvic pain at first and subsequently presented with more severe persistent right sided pelvic pain. Typically, the right ovary is more prone to develop torsion possibly due to the presence of the sigmoid colon on the left side, which gives a stabilizing effect on the left side.⁷ Our patient had a right ovarian cyst torsion which masqueraded as acute appendicitis.

The diagnosis of adnexal torsion is usually made clinically with corroborative ultrasound.⁵ Sensitivity and specificity of ultrasound in making diagnosis of ovarian torsion is quoted to be 70% and 87% respectively.¹⁰ Transvaginal and abdominal ultrasound with central venous Doppler studies should be the first line investigation for looking for adnexal mass and decreased or absent vascular flow in the ovarian vessels.⁷ It is important to note that Doppler flow is not always absent in torsion.^{7,10} Multiple degenerating uterine fibroids and suspected acute appendicitis may have contributed the missed diagnosis of ovarian torsion as the presence of huge multiple uterine fibroid masked the adnexal structures.

CT abdomen and pelvic contrast can be done when there is suspicion of ovarian torsion but there is difficulty to visualise the ovary if there is presence of a large mass.⁷ This might have been the case with our patient who had large uterine fibroids filling up her pelvis and abdomen but this was not done for her as she presented acutely at second presentation and opted for urgent exploratory laparotomy. MRI is useful in diagnosis of ovarian torsion if findings on ultrasound scanning are equivocal, though it is not imaging modality of choice if torsion is suspected.^{1,2,9} Ghosh and McKay presented a case of missed diagnosis of ovarian torsion in a 25-year-old lady for several reasons.¹ Havaladar et al presented a case of right ovarian torsion in a 55-year old multiparous postmenopausal woman and had total abdominal hysterectomy with bilateral salpingo-oophorectomy (TAH+BSO).¹¹ Ovarian torsion is a gynaecological emergency and urgent intervention is paramount for preservation of the ovary. Laparoscopy or laparotomy is required for definitive diagnosis and treatment of ovarian torsion.^{1,6,7} Our patient had exploratory with right salpingo-oophorectomy, myomectomy and appendectomy.

Despite the clues, a diagnosis of ovarian torsion is still a challenge in emergency setting. The clinical features are variable, the differential diagnosis is broad, sonographic features are inconsistent and salvage of the ovary is rare.^{1,9} The patient in this case presented first with abdomino-pelvic pain and swelling which was managed as red degeneration of fibroids. She presented again with more localized symptom of right iliac fossa pain, nausea and vomiting and was taken in for surgery only to find an irredeemable right ovary due to ovarian torsion. This was a preventable incident if early diagnosis and intervention was carried out. The presence of large pelvic mass (uterine fibroids) masking the ovaries on pelvic ultrasound, and failure to recognize ovarian torsion as a differential diagnosis during her presentations contributed to the outcome of this case.

CONCLUSION

We presented a case of a missed diagnosis of ovarian torsion that resulted in the loss of ovary in a 35-year old lady with huge multiple uterine fibroids. This case emphasizes on the need to consider ovarian torsion as a differential diagnosis of acute abdomen in young females and the importance of early diagnosis and intervention.

ACKNOWLEDGEMENTS

We Authors would like to thank the management of the Limi Hospitals, Abuja for their advice and spurring to make this publication.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. Ghosh A, Mckay R. A missed diagnosis of ovarian torsion in a patient with bilateral ovarian dermoid cyst: a case report. *Cureus.* 2019;11(10):e5963.
2. Sharma R. Ovarian torsion. Available at: <https://radiopaedia.org/articles/ovarian-torsion>. Accessed on 20 October 2024.
3. Huang C, Hong MK, Ding DC. A review of ovarian torsion. *Tzu-Chi Med J.* 2017;29(3):143-7.
4. Ekweani J C, Oguntayo A, Kolawole A, Zayyan M. An 8-year review of ovarian cyst accidents at a tertiary health centre in Northwestern Nigeria. *Trop J Obstet Gynaecol.* 2016;33(3):307-9.
5. Dawood MT, Naik M, Bharwani N, Sudderuddin SA, Rockall AG, Stewart VR. Adnexal torsion: Review of Radiologic Appearances. *RadioGraphics.* 2021;41:609-24.
6. Becker JH, de Graaff J, Vos MC. Torsion of the ovary: a known but frequently missed diagnosis. *Eur J Emerg Med.* 2009;16(3):124-6.
7. Faustinella F. An uncommon clinical presentation of ovarian torsion. *J Urgent Care Med.* 2018. Available at: <https://www.jucm.com/an-uncommon-clinical-presentation-of-Ovarian-torsion/>. Accessed on 20 October 2024.
8. Grunau GL, Harris A, Beckley J, Todd NJ. Diagnosis of Ovarian Torsion: is it time to forget about Doppler? *Diagnost Imag.* 2018;40(7):871-5.
9. Damigos E, John J, Ross J. An update on the diagnosis and management of ovarian torsion. *Obstet Gynaecol.* 2012;14:229-36.
10. Houry D, Abbott JT. Ovarian torsion: a fifteen-year review. *Ann Emerg Med.* 2001;38(2):156-9.
11. Havaladar N, Ashok K. Torsion of non-gravid uterus with ovarian cyst- an extremely rare case. *Pan Afr Med J.* 2014;18:95.

Cite this article as: Okafor LC, Ogoke NC, Iseko KI, Meraiyebu AE, Adagadzu SJ, Ukoha C. A missed diagnosis of ovarian torsion in a patient with multiple degenerating uterine fibroids: a case report. *Int J Reprod Contracept Obstet Gynecol* 2025;14:1623-6.