

## Case report



# Normal adnexal torsion and pregnancy: about a case

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## Normal adnexal torsion and pregnancy: about a case

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## Abstract

*Adnexal torsion is a rare pathology secondary to the total or partial rotation of the adnexa around its vascular axis. The occurrence of adnexal torsion on a healthy ovary is an even rarer situation. The diagnosis remains difficult, due to the ascension of the ovary in advanced pregnancies, which can mimic other surgical emergencies such as acute appendicitis, cholecystitis or acute pyelonephritis. The interest of this situation lies in its diagnostic difficulty, and in the choice of the therapeutic attitude to adopt. We present the case of adnexal torsion on a healthy ovary in the second trimester of pregnancy.*

## Introduction

Adnexal torsion is a rare pathology secondary to the total or partial rotation of the adnexa around its vascular axis. The occurrence of adnexal torsion on a healthy ovary is an even rarer situation. The proportion of adnexal torsions occurring during pregnancy varies from 13 to 28% and its frequency is estimated at 1/5000 pregnancies (7 cases per 1000 pregnancies in the case of an associated adnexal mass). However, diagnosis remains difficult, due to the ascension of the ovary in advanced pregnancies which can mimic other surgical emergencies such as acute appendicitis, cholecystitis or acute pyelonephritis. The interest of this situation lies in its diagnostic difficulty, and in the choice of the therapeutic attitude to adopt. We present the case of adnexal torsion on a healthy ovary in the second trimester of pregnancy.

## Patient and observation

The patient is 32 years old, with no pathological antecedent. Primiparous primigravida, 16 weeks pregnant, presents to the gynaecological emergency room for pelvic pain with right lateralized right of sudden onset. The patient does not describe metrorrhagia or leucorrhoea. On examination: the patient was hemodynamically stable, afebrile, the patient had a defect in the right iliac fossa. The obstetrical examination found a closed posterior cervix, with palpation of a painful latero-uterine mass. No metrorrhagia. The patient benefited from a pelvic and endovaginal ultrasound showing a progressive mono-fetal pregnancy with a biometry corresponding to the term of the pregnancy, a placenta of normal appearance and normal quantity of liquid. A slightly heterogeneous echogenic image was present in the right latero-uterine cavity with anechoic zones of 55x45mm without Doppler recording, suggesting a large, twisted ovary. The patient underwent an exploratory laparotomy of the mini-Pfannenstiel type. During the exploration, the presence of an enlarged uterus with a left adnexa without any particularity was noted. The right adnexa was

severely ischaemic (Figure 1, Figure 2), twisted by 3 turns, without an individualisable cystic mass and the utero-ovarian ligament of normal appearance. The treatment consisted of detorsion of the right adnexa and then resection of the part of the necrotic ovary, leaving the rest of the ovarian parenchyma, and the operation was completed by right ovariopexy. The post-operative follow-up was without particularity with the disappearance of pain. An ultrasound check-up after 2 weeks finds that the pregnancy is still evolving.

## Discussion

During pregnancy, adnexal torsion is a rare emergency. Its incidence varies from 3 to 5 per 10,000 pregnancies [1,2]. Between 8 and 28% of torsions occur during pregnancy [3,4], mostly in the first trimester but can be diagnosed at any age of pregnancy [4]. Usually the torsion occurs on a pathological ovary: malignant or benign tumour, cyst of the corpus luteum, or on the occasion of an ovarian hyperstimulation syndrome at the beginning of pregnancy [3]. Symptoms are characterised by sudden lateral pelvic pain associated with nausea and vomiting. Its diagnosis during pregnancy is made complex because it requires the elimination of the classic differential diagnoses but also those which may be related to pregnancy (miscarriage, retro-placental haematoma, uterine rupture). In addition, both clinical and imaging examinations become more difficult due to the volume of the uterus and the concomitant ascent of the ovary into the abdominal cavity. Ultrasound is the reference examination. It eliminates differential diagnoses and looks for factors that may promote torsion and indirect signs of ischemia. The first interruption of venous flow results in reactive oedema which is detectable by the augmentation of the ovarian volume compared to the contralateral side [5,6].

In addition, the increase in the number of cortical follicles is a non-specific aspect, but one which has been found multiple times in the case of torsion on a healthy ovary. This aspect of homogeneous and

peripheral follicular structure was found in our case report. The usefulness of Doppler on ovarian vessels remains controversial. Although the absence of a Doppler signal confirms the absence of blood flow and therefore torsion, the reverse is not true [7]. MRI is a satisfactory complementary exploration technique for pregnant women, which has a higher accuracy than ultrasound [8]. Adnexal torsion is a real surgical emergency. Currently laparoscopy is recommended for a gestational age of less than 17 years, although safety guidelines must be observed. They preferred the use of an open laparoscopy, an insufflation pressure of between 8 and 12 mmHg, an appropriate position of the trocars and, finally, gentle mobilisation of the uterus. Conservative or radical treatment is decided according to the appearance of the adnexa 10 minutes after detorsion [9]: for stages 1 and 2 (lesions with total or partial recovery after detorsion), conservative treatment is recommended, allowing functional recovery in 90% of cases. For stage 3 (necrotic, black and friable lesions without recovery after untwisting), adnexectomy appears preferable. For other authors, the high functional recovery capacity of ovarian tissue justifies conservative treatment even in the face of an adnexa of doubtful vitality [9]. Ovariopexy is essential when there is a malformation of the ovarian ligaments or an immediate recurrence of the torsion [10].

## Conclusion

The diagnosis of adnexal torsion remains difficult, especially during pregnancy and even more in the presence of a healthy adnexa. Paraclinical examinations and especially ultrasound can help in the diagnosis and eliminate differential diagnoses. Surgical treatment is based on the untwisting of the adnexa and preserving the ovarian parenchyma as much as possible. Ovariopexy is not systematically practiced. The evolution of the pregnancy is generally favourable.

## Competing interests

The authors declare no competing interests.

## Authors' contributions

KE made substantial contributions to conception and design, acquisition of data, analysis and interpretation of data; he has been involved in drafting the manuscript and revising it critically for important intellectual content. AL made substantial contributions to interpretation of data and she has been involved in drafting the manuscript and revising it critically for important intellectual content. AB and AK made substantial contributions to conception and design and acquisition of data; they have been involved in drafting the manuscript. AK made substantial contributions to interpretation. All authors read and approved the final version of the manuscript

## Figures

**Figure 1:** per operative image showing adnexal torsion and ovarian necrosis

**Figure 2:** per operative image ovarian necrosis

## References

1. Zanetta G, Mariani E, Lissoni A, Ceruti P, Trio D, Strobelt N *et al.* A prospective study of the role of ultrasound in the management of adnexal masses in pregnancy. *BJOG Int J Obstet Gynaecol.* 2003;110(6): 578-83. **PubMed | Google Scholar**
2. Kumari I, Kaur S, Mohan H, Huria A. Adnexal masses in pregnancy: a 5-year review. *Aust N Z J Obstet Gynaecol.* 2006;46(1): 52-4. **PubMed | Google Scholar**
3. Oelsner G, Cohen SB, Soriano D. Minimal surgery for the twisted ischaemic adnexa can preserve ovarian function. *Hum Reprod Oxf Engl.* 2003;18(12): 2599-602. **PubMed | Google Scholar**

4. Boughizane S, Naifer R, Hafsa A, Chaieb A, Hidar S, Lassouad L *et al.* Laparoscopic management of adnexal tumors after the first trimester of pregnancy. *J Gynécologie Obstétrique BiolReprod.* 2004;33(4): 319-2. **PubMed** | **Google Scholar**
5. Graif M, Shalev J, Strauss S, Engelberg S, Mashiach S, Itzchak Y. Torsion of the ovary: sonographic features. *AJR Am J Roentgenol.* 1984;143(6): 1331-4. **PubMed** | **Google Scholar**
6. Pansky M, Smorgick N, Herman A, Schneider D, Halperin R. Torsion of normal adnexa in postmenarchal women and risk of recurrence. *Obstet Gynecol.* 2007;109(2 Pt 1): 355-9. **PubMed** | **Google Scholar**
7. Abu-Musa A, Nassar A, Usta I, Khalil A, Hussein M. Laparoscopic unwinding and cystectomy of twisted dermoid cyst during second trimester of pregnancy. *J Am Assoc Gynecol Laparosc.* 2001;8(3): 456-60. **PubMed** | **Google Scholar**
8. Mage G, Canis M, Manhes H, Pouly JL, Bruhat MA. Laparoscopic management of adnexal torsion: a review of 35 cases. *J Reprod Med.* 1989;34(8): 520-4. **PubMed** | **Google Scholar**
9. Bider D, Mashiach S, Dulitzky M, Kokia A, Lipitz S, Ben-Rafael Z. Clinical surgical and pathologic findings of adnexal torsion in pregnant and non pregnant women. *Surg Gynecol Obstet.* 1991 Nov;173(5): 363-6. **PubMed** | **Google Scholar**
10. Nichols DH, Julian PJ. Torsion of the adnexa. *Clin Obstet Gynecol.* 1985 Jun;28(2): 375-80. **PubMed** | **Google Scholar**



**Figure 1:** per operative image showing adnexal torsion and ovarian necrosis



**Figure 2:** per operative image ovarian necrosis