

**ADNEXAL TORSION WITH NORMAL OVARY IN PREGNANCY: ABOUT A CASE****Zineb Zghari<sup>2\*</sup>, Soukaina Khalta<sup>2</sup>, Intissar Benzina<sup>2</sup>, Najia Zraidi<sup>1</sup>, Amina Lakhdar<sup>1</sup>, Abdelaziz Baidada<sup>1</sup> and Aicha Kharbach<sup>2</sup>**<sup>1</sup>Gynaecology-Obstetrics and Endoscopy Department, Maternity Souissi, University Hospital Center IBN SINA, University Mohammed V, Rabat, Morocco.<sup>2</sup>Gynaecology-Obstetrics and Endocrinology Department, Maternity Souissi, University Hospital Center IBN SINA, University Mohammed V, Rabat, Morocco.**\*Corresponding Author: Zineb Zghari**

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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. It may be favored by the existence of an adnexal mass or, more rarely, occur on a normal adnexa. We report a case of adnexal torsion on a normal ovary in the second trimester of pregnancy in order to draw attention to this diagnosis, for which only early management can avoid irreversible lesions due to ischemia, which may jeopardize the subsequent prognosis for fertility.

**KEYWORDS:** adnexal mass or, more rarely, occur on a normal adnexa.**INTRODUCTION**

Adnexal torsion is the fifth most common surgical emergency in gynecology. The occurrence of adnexal torsion with normal ovary is a rare situation. However, Ovarian torsion is most common in the first trimester of pregnancy, but can happen well into the third trimester, and torsion early in pregnancy seems to increase the risk for recurrence at a later gestational age.

We report here a case of adnexal torsion, on a normal ovary, during pregnancy in the second trimester. The interest of this situation lies in its diagnostic difficulty, and in the choice of the therapeutic attitude to adopt. Indeed, in the absence of ovarian cystic formation, when should this diagnosis be evoked? What is the preferred approach? What surgical procedure should be performed on an adnexal torsion that has occurred on a Heath ovary to avoid its recurrence?

**OBSERVATION**

Mrs D., 27 years old, G1P1, had undergone an appendectomy at the age of fourteen and had no notable medical history.

She presented to the emergency room of the Souissi maternity hospital during the 14 week of amenorrhea for violent intense abdominal pain evolving for four days and not resolving under level 1 analgesics.

Abdominal examination showed a defense right iliac fossa with a positive Rovsing sign. The gynecological examination with the speculum found a macroscopically normal cervix, no metrorrhagia or leucorrhoea and on vaginal touch the cervix was long closed posteriorly.

Ultrasound revealed an evolving monofetal pregnancy with a biometry in accordance with the term, a homogeneous placenta normally inserted, amniotic fluid in normal quantity, a cervical length at 38 mm, and the presence of a large right ovary of 5 cm, with preserved Doppler flow, without cystic image. However, we noted an asymmetric, abnormally ascending topography of the ovary, with pain acquired on pressure when the probe was passed. The diagnosis of right adnexal torsion is then evoked.

A laparotomy was carried out in emergency, the exploration revealed a twisted right ovary with two turns of spires, after detorsion, the ovarian revascularization was judged to be of good quality (Fig. 1–2). Given the absence of a curable cause (absence of a cyst), and in order to avoid a recurrence, the right ovary was cyst, and in order to avoid a recurrence, the right ovary was fixed to the right lateral parietal peritoneum peritoneum, at the level of the utero-ovarian ligament. The postoperative course was simple both obstetrically and surgically with a good prognosis for vaginal delivery at term.



**Fig 1: Externalization of the twisted right ovary by a mini laparotomy approach.**



**Fig 2: Ovarian revascularization after detorsion.**

## DISCUSSION

Ovarian torsion can be a particularly challenging diagnosis during pregnancy, as the signs and symptoms are non-specific and associated with a wide variety of other abdominal disease processes. Unfortunately, for these reasons, ovarian torsion is a frequently missed diagnosis<sup>[1]</sup>, 8 and 28% of torsions occur during pregnancy<sup>[2]</sup>. They occur preferentially in the first trimester of pregnancy but can be diagnosed at any gestational age.<sup>[2]</sup>

Torsion on a normal ovary is not classically described during pregnancy.

Symptoms are characterized by sudden lateral pelvic pain associated with nausea and vomiting.

Ovarian torsion should be an essential part of the clinician's differential diagnosis for abdominal pain in

pregnancy, particularly in the absence of other signs and symptoms, and in the context of a history of fertility treatments.

Ultrasound is the reference examination, it enables not only visualization of the affected ovary, but also confirmation of the presence of a viable pregnancy. The most commonly associated sonographic finding of ovarian torsion is ovarian enlargement.

The usefulness of ovarian vessel Doppler is controversial. Although the absence of a Doppler signal confirms the absence of arterial or venous flow and therefore torsion, the reverse is not true.<sup>[3]</sup>

Recommendations for the management of ovarian torsion in pregnancy are limited by the small size of most studies investigating the topic of ovarian torsion, but management is most commonly laparoscopy, with cyst aspiration and laparotomy as alternatives.<sup>[4]</sup> Management choices will be dependent upon the gestational age of the fetus as well as anatomic characteristics of the affected ovary (size, position, existence of an adnexal mass).<sup>[5]</sup> Once the diagnosis of ovarian torsion is suspected or confirmed on ultrasound, immediate intervention is necessary. Many techniques have been described: fixation of the ovary to the broad ligament or to the lateral wall, shortening of the utero-ovarian ligament<sup>[6]</sup> or fixation of the ovary to the uterus. The latter does not seem to be reasonably applicable during pregnancy, or it may be surgically removed.<sup>[7]</sup>

However, the efficacy and safety of ovariopexy have not been demonstrated. The shortening of the uteroovarian ligament could be at the origin of a decrease in ovarian vascularization and therefore an alteration in ovarian function.<sup>[8]</sup> It is also conceivable that the parietal lateral fixation could be at the origin of an anatomical disturbance of the tubo-ovarian relationships, and of occlusion on a flange.<sup>[9]</sup> Thus, the choice of technique is left to the surgeon according to the specific anatomical constraints of each patient.

Rates of survival of the pregnancy (fetus or embryo) after laparotomy or laparoscopy for ovarian torsion are currently not well defined, but have been favorable in case series outcomes. Maternal death from ovarian torsion has not been reported in the literature.<sup>[10]</sup>

## CONCLUSION

Ovarian torsion during pregnancy is a challenging diagnosis, due to the non-specific signs and symptoms involved, it occurs mostly during the first two trimesters of pregnancy (70 to 90% of cases); but it can sometimes occur during the third trimester of pregnancy.

Classically described on pathological ovaries or tubes, adnexal torsion can however occur on a normal ovary. Recurrence in the absence of preventive treatment is frequent in this situation. Bilateral ovariopexy then

seems to be a reasonable therapeutic option, whether it be by ovariopexy on the lateral aspect of the abdominal wall, or the shortening of the utero-ovarian ligament. During pregnancy, this technique can be performed by laparoscopy, this surgical approach should be preferred.

However, at the end of the and third trimester of pregnancy, a lateral laparotomy approach for a laparotomy for direct access to the adnexa may sometimes be necessary in order to fix the ovary.

## REFERENCES

1. Becker JH, de Graaf J, Vos CM. Torsion of the ovary: a known but frequently missed diagnosis. *Eur J Emerg Med*, 2009; 16: 124–6.
2. Zweizig S, Perron J, Grubb D, Mishell Jr DR. Conservative management of adnexal torsion. *Am J Obstet Gynecol*, 1993; 168: 1791–5.
3. Tepper R, Zalel Y, Goldberger S, Cohen I, Markov S, Beyth Y. Diagnostic value of transvaginal color Doppler flow in ovarian torsion. *Eur J Obstet Gynecol Reprod Biol*, 1996; 68: 115–8.
4. Boswell KM, Silverberg KM. Recurrence of ovarian torsion in a multiple pregnancy: conservative management via transabdominal ultrasound-guided ovarian cyst aspiration. *Fertil Steril*, 2010; 94: 1910.e1–3.
5. Kolluru V, Gurumurthy R, Vellanki V, Gururaj D. Torsion of ovarian cyst during pregnancy: a case report. *Cases J*, 2009; 2: 9405.
6. Jardon K, Bothschorisvili R, Rabischong B, Rivoire C, Nohuz E, Houle C. How I perform. an ovariopexy after adnexal torsion. *Gynecol Obstet Fertil*, 2006; 34: 529–30.
7. Weitzman VN, DiLuigi AJ, Maier DB, Nulsen JC. Prevention of recurrent adnexal torsion. *Fertil Steril*, 2008; 90: 2018. e1–3.
8. 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.
9. Pena JE, Ufberg D, Cooney N, Denis AL. Usefulness of Doppler sonography in the diagnosis of ovarian torsion. *Fertil Steril*, 2000; 73: 1047–50.