

Adnexal Torsion and Pregnancy: A Case Report

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Abstract: *Adnexal torsion in pregnancy is a rare entity. Acute pelvic pain during pregnancy may pose a problem of differential diagnosis. We present the case of a 40 year old patient, who consulted for acute pelvic pain with 6 months amenorrhea and who benefited from an exploratory laparotomy in favor of a torsion on an ovarian cyst. We performed a distortion of the adnexa with cystectomy. The post-operative course was unremarkable. An ultrasound check-up after one week was in favor of a still evolving pregnancy. Adnexal torsion is an emergency that should not be ignored in the presence of any acute pelvic pain in a pregnant woman. Conservative treatment is currently the gold standard and appropriate management is necessary to avoid possible maternal and fetal*

Introduction

Adnexal torsion during pregnancy is a rare entity, generally occurring during the first two trimesters of pregnancy (70 to 90%)(1 ; 2, 3), secondary to total or partial rotation of the adnexa around its vascular axis. Diagnosis remains difficult, because of the ascension of the ovary in advanced pregnancies, which can mimic other surgical emergencies, notably acute appendicitis, cholecystitis or acute pyelonephritis.

Some authors advocate preservation of the ovary despite its necrotic appearance, as its function is preserved in 88 to 100% of cases [1, 4], recovery of the ovary is possible by conservative surgery in cases seen and treated early, which is very rarely the case. We present the case of an adnexal torsion in the second trimester of pregnancy.

Patient and observation

Mrs. M. D., 40 years old, G7P5 (5EV/AVB +1FC), at six months of pregnancy, was seen in the emergency room for right iliac fossa pain evolving for 12 hours.

The history reveals the sudden onset of right iliac fossa pain that woke the patient up; this pain was continuous, of high intensity, of permanent torsion type, with hypo gastric irradiation, without analgesic position and associated with bilious vomiting.

The patient was referred to our emergency department.

Our patient had her menarche at 14 years of age; her menstrual cycle is 28 days long and her period lasts six days.

Our patient did not suffer from any chronic medical pathology. She had never undergone surgery. She is blood group A rhesus positive. At the time of the occurrence of the pain which motivated the consultation, no drug treatment was in progress. Our patient was alive and in apparent good health at the time of the history.

Examination on admission found a conscious patient with a GCS of 15, VAS of 10. Hemodynamically and respiratory stable: BP 13/7mmhg, HR: 95 bpm, FR 16 C/min, afebrile T: 37, Conjunctiva were well stained. Abdominal examination finds a soft breathing abdomen and had a right flank tuck. Superficial palpation did not reveal any skin hyperesthesia. We found a painful oval mass on the right flank, with a smooth surface and contours that were difficult to appreciate because of the pain.

The mass measured 18 cm in diameter in its long axis; we avoided hitting the mass because of the pain.

Speculum examination showed purplish exo-cervical and vaginal mucosa, no bleeding from the endocervix.

Bi-manual touch revealed a long, posterior, closed cervix; the uterus was enlarged and consistent with a 25-week intrauterine pregnancy. The left adnexa was free and painless while pain prevented any bi-manual palpation of the right adnexa, the right cervico-vaginal cul-de-sac was very sensitive but not normally bulging with presence of a right latero-uterine sensitivity.

The ultrasound (suprapubic) is in favor of an evolving monofetal pregnancy with positive cardiac activity and biometry at 26 weeks of amenorrhea (Figure 1), with the presence of a multilocular anechoic right latero-uterine image measuring 18 x 14 cm (Figure 2), with suspicion of right adnexal torsion.

The diagnosis was that of a torsion of an ovarian cyst in pregnancy. The indication for urgent laparotomy was given, the preoperative work-up carried out in emergency was normal.

The findings were: right adnexa (right cystic bi-loculated ovary with a thick wall twenty centimetres in diameter and liquid content) black and with a necrotic appearance twisted by three turns of the spiral around the utero-ovarian ligament, a globular uterus increased in volume as if for a twenty-six week pregnancy (Figure No. 3), the left adnexa with a macroscopically normal appearance, and the rest of the pelvis without any particularity.

The surgical procedure consisted first of a detorsion of the adnexa, which showed signs of vitality 30 minutes later (Figure N° 4). We then proceeded to a right cystectomy (Figure N° 5).

The post-operative course was unremarkable with disappearance of pain. An ultrasound check after one week found a pregnancy still evolving.

Discussion

Adnexal torsion is a rare emergency during pregnancy, with an incidence of 3 to 5 per 10,000 pregnancies [6,7]. Between 8 and 28% of torsions occur during pregnancy [8,9], usually in the first trimester but can be diagnosed at any time during pregnancy [9]. Usually torsion occurs in a pathological ovary (malignant or benign tumor). The symptomatology is usually characterized by sudden lateral pelvic pain associated with nausea and vomiting. Its diagnosis during pregnancy is complex because it requires the elimination of the classical differential diagnoses but also those that may be related to pregnancy (miscarriage, retro placental hematoma, uterine rupture).

In addition, both clinical and imaging examinations become more difficult because of the uterine volume and the concomitant ascension of the ovary into the abdominal cavity. Adnexal torsion may cause uterine contractions, thus leading to a risk of miscarriage (early or late) or premature delivery depending on the age of pregnancy. The biological workup is not specific, there may be hyper leukocytosis or an increase in C-reactive protein, indicating an inflammatory process.

In this case, either the adnexal mass (most often ovarian) pre-exists the pregnancy or it appears and develops during the pregnancy. In the first case, it is most often an ovarian mass of an organic nature, whereas in the second case, the functional character is all the more evident as the appearance of the mass is favored by ovarian stimulation within the framework of medically assisted procreation and it disappears spontaneously before the sixteenth week of pregnancy [10, 11, 12]. In our parturient, whose pregnancy was spontaneous, it was probably a pre-existing mass. The torsion in our case occurred during the second trimester

The clinical picture of our pregnant woman corresponded to the typical form described in the literature [13].

The main differential diagnoses in the presence of intense unilateral pelvic pain of sudden onset without fever, without per vaginal or intraperitoneal bleeding, without signs of intestinal obstruction in the presence of a homolateral adnexal mass at twenty-six weeks of pregnancy are torsion of a pedunculated leiomyoma, renal colic due to lithiasis of the uretero-vesical junction, or lithiasis cholecystitis [13]. These two diagnoses were eliminated by pelvic ultrasound performed in the emergency room, which allowed to specify the cystic nature of the mass and to exclude a dilatation of the excretory tract.

MRI is a satisfactory complementary exploration technique in pregnant women, which has the same interest as ultrasound with greater precision [16]. The combination of Doppler and MRI is useful but should not delay surgical management.

Surgical management of ovarian masses during pregnancy is only conceivable in two situations: the occurrence of acute complications such as torsion, rupture or intracystic haemorrhage, and the presence of arguments of malignancy or simply the persistence of a benign-looking cyst beyond the fourteenth week of amenorrhea. The initial approach before the sixteenth week of pregnancy is laparoscopic, whether the surgery is urgent or scheduled. It often allows the surgical procedure to be carried out while leaving the possibility of conversion to laparotomy. The therapeutic procedure depends on the appearance of the mass; a conservative approach consisting of detorsion associated or not with ovariopexy is logical in the case of a viable-looking mass. Oophorectomy or adnexectomy is indicated in the case of a mass with a necrotic appearance; however, for some authors, it is only indicated in the case of macroscopic evidence of malignancy.

The laparoscopic management of adnexal pathologies in the first and second trimester of pregnancy is no longer discussed. Oelsner et al, compared the after-effects of 197 laparotomies and 192 laparoscopies in 17 centers [14]. Laparoscopy does not increase the risk of spontaneous abortion, premature delivery, intrauterine growth retardation or fetal malformation compared to laparotomy. It also presents a significantly lower risk of postoperative complications. Recommendations of the French National College of Gynecologists and Obstetricians (CNGOF) recommend the laparoscopic technique for the management of ovarian cysts during pregnancy up to 16-17 days' gestation (level of evidence 3), specifying that laparotomy is the most evaluated approach after 17 days' gestation [15],

Intraoperatively, in view of a totally necrotic ovarian cyst (Figure N°4), we opted for a cystectomy.

Like Mathevet et al [16], we decided to systematically perform tocolysis, unlike Roman who does not recommend tocolysis in the absence of uterine contraction [17].

Ultrasound control after one week in favour of a still evolving pregnancy.

Anatomopathology in favor of a borderline tumor

Conclusion

The diagnosis of adnexal torsion remains difficult, particularly during pregnancy.

The clinical picture is not very specific, the paraclinical examinations are not very reliable to make a positive diagnosis but they are still necessary to eliminate the different differential diagnoses and to look for an adnexal pathology. The surgical procedure must be conservative and consists of detorsion of the adnexa. The prognosis in pregnancy is generally favourable, but a few cases of delayed growth and premature delivery have been described.

Conflicts of interest

The authors declare no conflicts of interest.

Contributions of the authors

All authors contributed to the care of the patient and the writing of the manuscript.

Figures

Figure 1: Ultrasound biometry of a 26-27 SA pregnancy

Figure 2: Ultrasound image of an ovarian cyst

Figure 3: Torsion of the right adnexa, pregnancy of 26 SA

Figure 4: Intraoperative image after detorsion of the adnexa and beginning of recoloration

Figure 5: Necrotic ovarian cyst postoperatively

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Origine	DDR	TCM	AG	DAE(DDR)
Foetus A/1		CGA 26w3d+/- 1w0d		DAE(CG A) 18/08/2020
Foetus Pos		PLAC		Page 1/1
B Mode Measurements				
BPD(Hadlock)	<input checked="" type="checkbox"/>	6.90 cm	6.90	Moy. 27w5d
CT(Hadlock)	<input checked="" type="checkbox"/>	24.69 cm	24.69	Moy. 26w6d
DOF(HC)		8.77 cm	8.77	Moy.
CA(Hadlock)	<input checked="" type="checkbox"/>	24.17 cm	24.48 23.85	Moy. 28w3d
LF(Hadlock)	<input checked="" type="checkbox"/>	4.65 cm	4.65	Moy. 25w3d
Calculs 2D				
PFE(Hadlock)		1044g	(2lb 5oz)	
IC(Hadlock)		78.67 (70.00-86.00)	LF/AC(Hadlock)	-> 19.24 (20.00-24.00)
LF/BPD(Hohler)		-> 67.43 (71.0-87.0)	LF/CT(Hadlock)	18.83 (18.60-20.40)
CT/AC(Campbell)		-> 1.02 (1.05-1.22)		

Figure N° 1



Figure N°2



Figure N°3

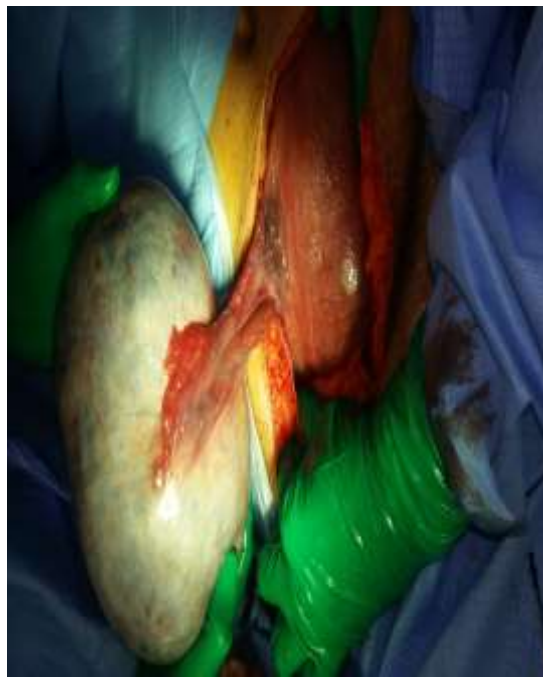


Figure N° 4



Figure N° 5