

# Bilateral Adnexal Masses during Pregnancy and Torsion Complication

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**Abstract:-** The detection of adnexal masses during pregnancy is a rare incident but because of the increased use of sonography, its prevalence is increasing. Their management essentially relies on imagery.

We present the report on the case of a patient admitted to our training for pelvic pain during a 24-week pregnancy, in whom radiological exploration was in favor of bilateral ovarian masses with suspicion of right torsion, an exploratory laparotomy confirmed the presence of Bilateral ovarian mass with right adnexal torsion, bilateral cystectomy was performed.

This article discusses the management of adnexal masses in pregnancy. The epidemiology, probable complications, diagnostic approach, and therapeutic management are discussed.

**Keywords:-** Adnexal Masses, Torsion, Pregnancy, Laparotomy.

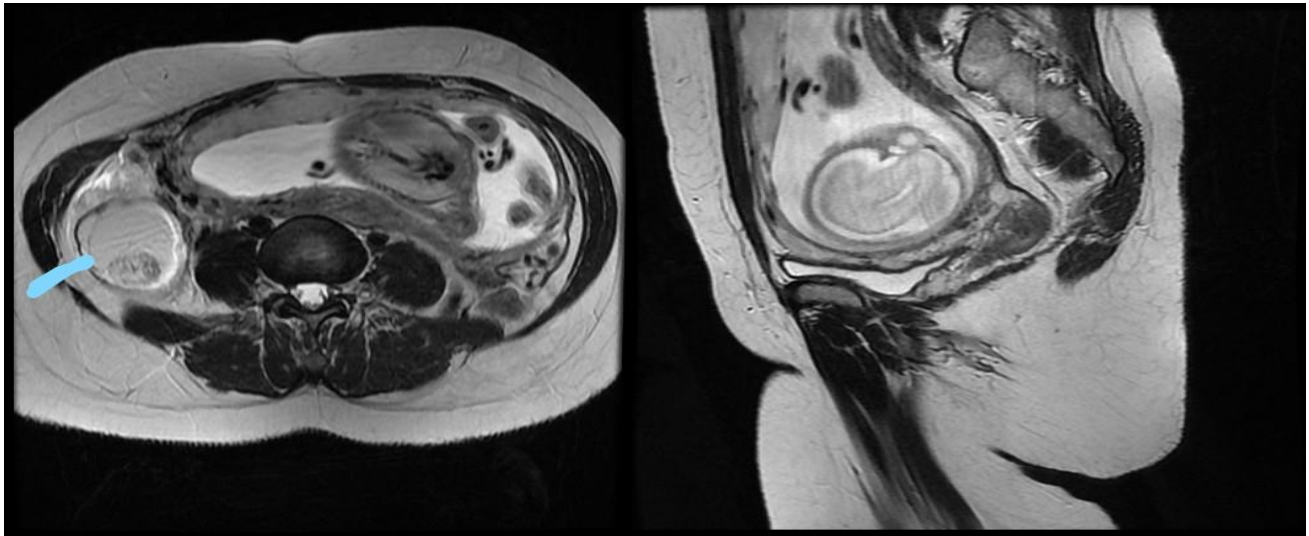
## I. INTRODUCTION

Incidental discovery of an adnexal mass during pregnancy has become a more common clinical scenario, and the estimated incidence of ovarian masses during pregnancy has improved with the routine use of ultrasound (1). It varies, but has been documented to be between 1% and 4%. (2). The majority of the small adnexal masses found on an early ultrasound regressed on their own. This is attributed to the benign nature of most of these masses, which are likely to be corpora lutea or other physiological masses. The resolve is also correlated with size, with total resolution happening in approximately 71% to 89% of adnexal masses <5 cm (3). They rarely size more than 5 cm in dimension, are mostly unilocular and practically always unilateral. Between the 16th and the 20th week, they are observed in only 0.3% of pregnancies (1). They almost certainly resolve spontaneously as the pregnancy progresses. Most of the other ovarian masses detected during pregnancy are benign dermoid cysts, which make up 20-40% of ovarian neoplasms (4). No adverse outcomes (defined as surgery, ovarian torsion, or malignancy) were observed in these pregnancies. The PubMed search yielded 16 results for "bilateral ovarian dermoid pregnancy." "We report the

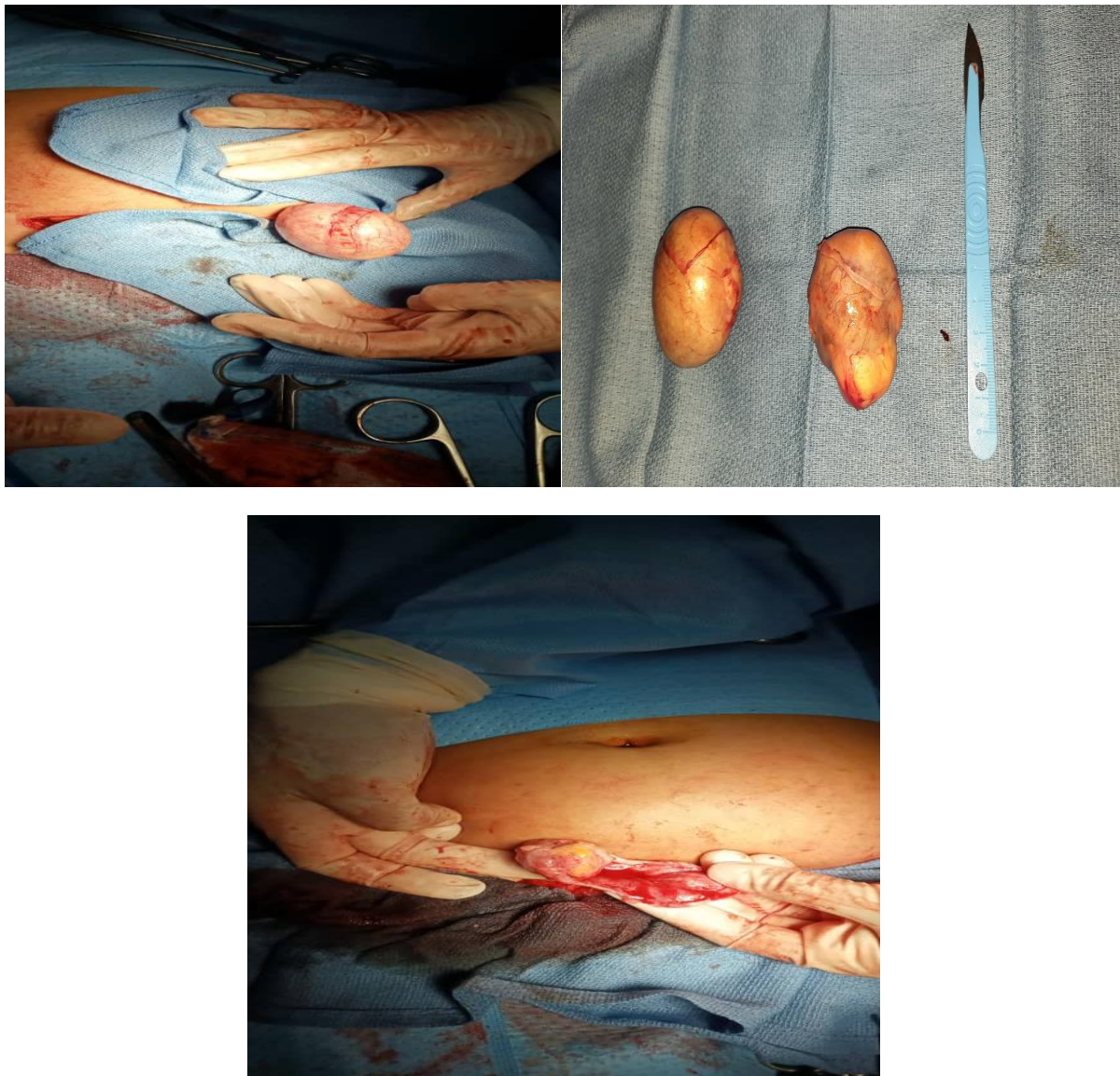
presentation of a pregnant woman with bilateral dermoid cysts and adnexal torsion of the right adnexa, for which our obstetrics department performed a successful procedure.

## II. CASE PRESENTATION

A 27-year-old woman, 31 + 5 weeks gestation (G2P1), presented to the emergency service with pelvic pain for 7 days. The pain was continuous and got progressively stronger and more intense. She did not report nausea or vomiting. There was no reported history of urinary complaints, fever, vaginal hemorrhage, or uterine contraction. No ovarian hyperstimulation therapy was used. On physical examination, the patient's vital signs were stable. Abdominal palpitation revealed a tender abdomen on the right lower side without signs of peritoneal irritation. The uterus was expanded commensurate with 24 weeks, and the cervix was firm with a small discharge. An obstetrical ultrasonography showed fetal parameters consistent with gestation with normal amniotic fluid and fetal activity. A homogeneous hypoechoic mass of multilocular mass of 5 × 61 mm was found in the right abdomen contiguous to the right uterine border with well limited. Doppler analysis revealed a lack of perfusion within the mass. She also had a 4 × 5 cm homogeneous echogenic mass in the left ovary. She was then forwarded for magnetic resonance imaging, which has confirmed the evidence of two adnexal masses (Fig. 1). The great right included several small round spheres characteristic of a dermoid cyst with evidence of adnexal torsion. No additional fluid was noted in the pelvic cavity. After discussing the risks and advantages with the patient, it was chosen to perform an exploratory laparotomy under spinal anesthesia with the presence of a 6 cm mass on the right adnexa for 1 turn of the antenna. Presence in the left lateral adnexa of a 5 cm mass without spiral turn with removal of the right and left adnexal masses and conservation of ovarian tissue (Fig.2). The fetus behaved well, with a heart rate of around 140 beats per minute at the beginning and end of the procedure. The final pathological diagnosis was "mature cystic teratoma" on two sides. The pregnancy developed successfully and the patient was discharged on the third postoperative day.



**Fig. 1** MRI of the pelvis. **Sagittal** view, **ET axial** view. There is a cyst originating from the right adnexa included multiple small round spheres characteristic of a dermoid cyst and signs the adnexal torsion



**Fig. 2** perioperative picture: removal of the right and left adnexal masses and conservation of the ovarian tissue

### III. DISCUSSION

The routine use of obstetrical ultrasound has augmented the finding of adnexal masses in pregnant women, even if they are not symptomatic. In most cases, these findings are coincidental (5). Once an adnexal mass is detected, the diagnostic route involves pelvic examination, imaging techniques, and measurement of serum tumor markers. The eventual goal of this procedure should be to detect adnexal masses of ovarian nature, differentiate them from non-ovarian masses and eliminate any malignancy. (6, 7). They account for approximately 30% of masses in pregnancy and usually resolve themselves spontaneously during the first or early second trimester of gestation. The complication of persistent masses includes adnexal torsion, which is hard to diagnose in pregnancy because its symptoms and signs are not characteristic and may be confounded by other acute abdominal conditions. It represents 3% of all surgical emergencies of urgent gynecological complaints (9). The prevalence of ovarian torsion in pregnancy is regarded as a rare finding, with a documented incidence of 1 to 10 per 10,000 spontaneous pregnancies (10). Adnexal torsion happens more frequently on the right than on the left, in a ratio of 3: 2. occurs most frequently in the first trimester, occasionally in the second as in our case, and rarely in the third, and the annexes can rarely be found. (11). Ultrasound remains the reference examination; it allows to eliminate differential diagnoses, and to look for indirect signs of ischemia. But also to find an increase in the number of cortical follicles, which is a non-specific aspect, but described many times in case of torsion on a healthy ovary. described many times in case of torsion on a healthy ovary. This appearance is thought to be due to fluid transudation secondary to ovarian congestion. This homogeneous and peripheral follicular aspect was found in our 2nd case. Ultrasound also has advantage of locating the ovary in the abdominal cavity and of looking for elective pain when the probe is passed. The use of Doppler seems to be promising in establishing the diagnosis, however a normal Doppler does not eliminate a torsion (12). In case of inconclusive ultrasound, or when a larger evaluation of tissue planes and connections to other organs may be important in obstetrical and surgical planning, magnetic resonance imaging (MRI) is a satisfactory complementary exploration technique in pregnant women, which has the same interest as ultrasound, but with greater precision. The association of Doppler and MRI is useful, but should not delay surgical management. Benefits include a more extensive scan and better definition of tissue planes and their content. (5).

The surgical treatment of ovarian masses during pregnancy is only conceivable when an acute complication only when an acute complication occurs, such as torsion, rupture or intracystic haemorrhage, and there are arguments for malignancy, or simply when a benign-looking cyst persists beyond the 16th week of amenorrhoea week of amenorrhoea. The initial approach during the 1st and 2nd trimester is laparoscopic; however, at the end of the second and third trimester of pregnancy, a laparotomy approach for direct access to the adnexa may sometimes prove necessary,

due to the growth of the uterine volume. Several retrospective series have shown the effectiveness of laparoscopy for ovarian surgery in pregnancy. The therapeutic procedure depends on the appearance of the mass; the conservative approach consists of distortion associated or not with ovariopexy, in the case of a mass with a viable appearance. oophorectomy or adnexectomy had indicated in the presence of a necrotic-looking mass; or for some authors, only in the presence of macroscopic evidence of malignancy (12). This is because the ovary has a great capacity for functional recovery, which justifies conservative treatment even in the case of vital adnexa. Treatment is justified even in the case of adnexa of doubtful vitality. In our situation, in the absence of appropriate equipment and competence in laparoscopic surgery we performed a laparotomy. The predominant adnexal masses identified in pregnancy are dermoids (as in our case), followed by cystadenomas. The largest number of masses in pregnancy are benign, but about 5% are malignant [13].

### IV. CONCLUSION

The diagnosis of adnexal masses during pregnancy is now facilitated by the use of prenatal ultrasonography. Most ovarian torsions in pregnancy occur during the first trimester. The diagnosis is often difficult due to the clinical polymorphism. Early surgery after the onset of symptoms increases the chances of preservation of the ovary. Conservative treatment with laparoscopic distortion should be preferred, having the advantage of a less invasive approach, with a reduced hospital stay, with no risk to the mother or the fetus. Although laparotomy and laparoscopy are permissible in pregnancy, the more frequent adnexal masses found during pregnancy are the dermoids.

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