

Torsion of a Large Ovariancyst during the Postpartum Period: A Case Report from the Niger-Turkey Friendship Hospital in Niamey

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How to cite this paper: Garba, R.M., Diaouga, H.S., Idi, N., Bako, B.B., Guédé, S., Oumara, M. and Nayama, M. (2022) Torsion of a Large Ovariancyst during the Postpartum Period: A Case Report from the Niger-Turkey Friendship Hospital in Niamey. *Open Journal of Obstetrics and Gynecology*, 12, 1134-1139.

<https://doi.org/10.4236/ojog.2022.1211097>

Received: October 5, 2022

Accepted: November 5, 2022

Published: November 8, 2022

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Abstract

Adnexal torsion is defined by the existence of a partial or complete torsion of the ovary and a tubal portion around its vascular pedicle. It is a rare gynecological emergency. We report the case of adnexal torsion on a large postpartum ovarian cyst in a 40-year-old patient. The diagnosis was suspected based on clinical and ultrasound signs and confirmed by exploratory laparotomy. The appearance of the cyst was suggestive of a mucinous cystadenoma of the ovary. The treatment was radical by performing an adnexectomy. The surgical piece weighed 5.2 kg. The postoperative course was simple. Anatomopathological examination had not been carried out; the parents had buried the operating piece.

Keywords

Pelvic Pain, Adnexal Torsion, Postpartum Period, Mucinous Cystadenoma

1. Introduction

Adnexal torsion is performed by twisting the axis defined by the lumbo-ovarian ligament and the tuboovarian ligament. It can involve the fallopian tube and the ovary, the ovary alone, and less frequently the fallopian tube alone [1]. It is a rare gynecological emergency with a prevalence of 2.5% to 7.4% of all gynecological emergencies [2]. Ovarian torsion during the postpartum period occurs mainly during the three weeks following vaginal delivery with an estimated risk of 8.8% [2] [3]. Most often, it concerns benign tumors of the ovary. The pathogenic

mechanism would be the displacement of the adnexa secondary to the physiological involution of the uterus and the relaxation of the supporting tissues, increasing the mobility of the mass and the risk of adnexal torsion [2] [3]. The clinical picture is nonspecific, particularly in a postpartum context, leading to a diagnostic delay. The diagnosis is suspected in the presence of a series of arguments combining the patient's history, clinical signs, and ultrasound results [2]. Treatment is surgical by laparoscopy or laparotomy [4]. The prognosis depends on the benign or malignant nature of the cyst and the diagnostic and therapeutic speed. We report a case of torsion of a large postpartum ovarian cyst in a 40-year-old patient whose diagnosis was suspected based on clinical and ultrasound signs and confirmed by exploratory laparotomy.

2. Case Report

It was a 40-year-old patient with three gestations, three parities, and three living children. She was 14 days postpartum from a spontaneous vaginal delivery at home of a newborn living in good health. She had not performed any ultrasound during pregnancy. The patient had no known medical or surgical history. She consulted the health center in her locality pour douleur abdominal, from which she was referred for better care. On admission to the emergency department of the hospital, she presented with acute pelvic pain of sudden onset on day 14 postpartum from vaginal delivery. The questioning revealed a notion of abdominopelvic mass preceding the second pregnancy during which she had not benefited from an ultrasound. After the third childbirth, given the abdominal volume, she thought of a second twin. The pelvic pain that evolved for three hours without an analgesic position and without relief from the usual analgesics forced the patient to come to a center in the capital, about a hundred kilometers from her home. General examination found a conscious patient, algic, apyrexia, covered with sweats, but hemodynamically stable. Physical examination revealed a distended and painful abdomen on palpation. The initial biological assessment found mild anemia with a hemoglobin level of 10.3 g/dl without hyperleukytosis or any other associated biological abnormality. Urgent ultrasound revealed a well-limited, multilocular, right uterine mass 20 cm long with a thin wall and anechoic content, with no fleshy portion or visible calcification (**Figure 1**). Abdominopelvic examination did not find any digestive or urinary ultrasound anomaly. In view of this clinical picture and the ultrasound performed, we suspected adnexal torsion and performed an exploratory laparotomy. The laparotomy had confirmed the diagnosis by highlighting a voluminous cyst at the expense of the right ovary with a torsion of the three turns of whorl with intracystic hemorrhage. The uterus and left adnexa were normal. The rest of the exploration was unremarkable. We performed a detorsion of the appendix and then a right adnexectomy that allowed the extraction of a cyst weighing 5.2 kg (**Figure 2** and **Figure 3**). The postoperative course was simple, with postoperative pain postoperatively. The patient was discharged from the hospital on post-

o p e r a t i v e



Figure 1. Urgent abdominopelvic ultrasound showing a well-limited, multilocular, thin-walled right uterine mass measuring 20 cm in long axis with anechoic content.

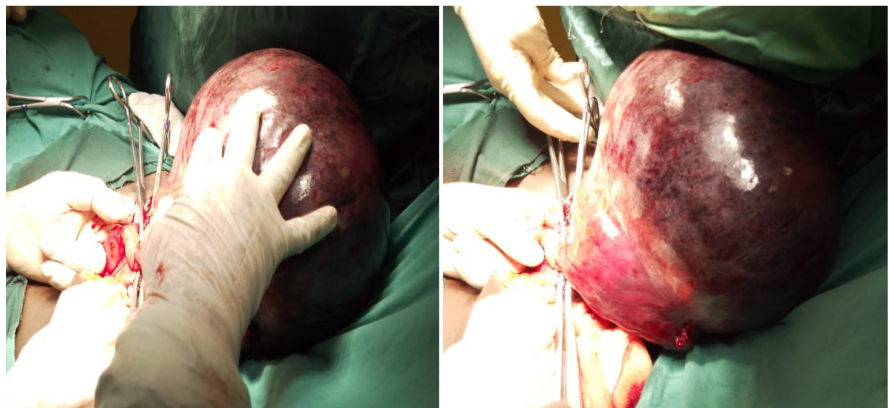


Figure 2. Intraoperative aspect of a voluminous cyst of the right ovary in torsion of three turns of whorl with intracystic hemorrhage.



Figure 3. Operative specimen after right adnexectomy. Right ovarian cyst of 5.2 kg.

day 4. Anatomopathological examination of the cyst had not been carried out; the parents had buried the operating room. The patient was seen again at 2 months in perfect health.

Informed consent: written informed consent to publish this case and use anonymized image was obtained from the patient.

3. Discussion

Adnexal torsion is defined by the existence of a rotation of at least one turn of the appendix around its vascular pedicle [1] [2]. It is a rare diagnostic and therapeutic emergency, particularly during pregnancy and postpartum [3] [4]. Estimates during pregnancy range from 0.2% - 3% [1] [5] [6] [7] up to 5% of all pregnancies [8]. Mature teratomas are by far the most common persistent adnexal masses during pregnancy. The first two trimesters of pregnancy are the preferred periods for the occurrence of adnexal torsion (70% to 90% of cases), but it can sometimes occur during the third trimester of pregnancy, although the increase in the size of the uterus in the third trimester reduces the mobility of the ovary [8]. In the postpartum period, ovarian torsion mainly occurs during the three weeks following vaginal delivery [5] [6]. The clinical symptomatology is not specific. Other diagnoses may be suggested depending on the time of discovery. In the case of a small volume, the diagnoses evoked may be adnexal abscess, endometritis, thrombosis of an ovarian vein, retroperitoneal hematoma, appendicitis, intestinal obstruction, urinary lithiasis and urinary tract infection [9]. Our patient the torsion had occurred two weeks postpartum. On the etiopathogenic level, in postpartum the displacement of the adnexa secondary to the physiological involution of the uterus and the relaxation of the supporting tissues, by a disproportionate stretching of the ligaments, increase the mobility of the mass and the risk of adnexal torsion [9]. There are two etiopathogenic entities: either the adnexal mass pre-exists pregnancy, or it appears and develops during pregnancy or postpartum. In the first case, it is most often an ovarian mass of an organic nature, while in the second case, it is often a functional cyst. In our patient, the clinical and ultrasound picture was in favor of a cystic mass evoking mucinous cystadenoma. However, despite the absence of an anatomopathological examination, several elements are in favor of its benignity, duration of appearance, conservation of the general condition and macroscopic aspects. Preoperative diagnosis of adnexal torsion is difficult due to the non-specificity of the clinical picture. This is explained by a great disparity in the modes of presentation. The abrupt onset is inconstant, as is the high intensity of the pain felt by the patient. The predominantly pelvic localization of the pain can be evocative. The clinical picture presented in our patient by intense acute pelvic pain without antalgic position. Faced with the great disparity in the presentation of adnexal torsions, Huchon *et al.* [1] developed a score to aid in the preoperative diagnosis of ad-

nexal torsions (**Table 1**). This score takes into account a range of arguments combining the patient's history, clinical signs, and ultrasound results.

Table 1. Preoperative composite score for the diagnosis of adnexal torsion [1].

Criteria	Number of score points
Absence of metrorrhagia or leucorrhoea	25
Adnexal cyst larger than 5 cm on ultrasound	25
Vomiting	20
Evolution of the pain for less than 8 hours during the emergency room consultation	20
Unilateral abdominal-pelvic and/or lumbar pain	15

Values below 35 for this score would eliminate the diagnosis of adnexal torsion with a risk of less than 5%, while a score above 60 would find the presence of adnexal torsion in 70% of cases involving emergency laparoscopy [1]. The score value was 85 in our patient. However, the authors state that this score would require validation by a large-scale prospective study for routine use [1].

A very recent model has just been validated for the preoperative diagnosis of adnexal torsion based on three parameters that could help clinicians in management [10].

The availability and cost of scanners and magnetic resonance imaging make them generally inaccessible in Africa.

The definitive diagnosis of ovarian torsion remains intraoperative; the surgical intervention is therefore initially diagnostic, then therapeutic [2]. The treatment is surgical by laparoscopy or laparotomy. In the absence of contraindications, laparoscopy can be performed up to 16 weeks. Conservative treatment corresponds to detorsion of the adnexa, followed by a nondetrimental procedure for fertility if necessary: cyst or intraperitoneal cystectomy. The radical treatment is adnexectomy (or oophorectomy or salpingectomy) of the adnexa in torsion [1]. In our observation, the treatment was radical by adnexectomy.

4. Conclusion

Adnexal torsion is one of the rarest postpartum gynecological emergencies. It mainly concerns cystic ovarian masses of a benign nature. This is the case of mucinous cystadenoma of the ovary. Bulky ovarian cancer generally creates parietal and uterine adhesions that would limit its mobility and the risk of torsion. The diagnosis of adnexal torsion has benefited from the contribution of diagnostic models in recent years. Treatment is surgical and depends on the age of the patient and the size of the tumour. After vaginal delivery, special follow-up and scheduled surgery should be required in parturients with presumed benign ovarian masses.

Conflicts of Interest

The authors declare no conflict of interest.

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