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## TORSION OF AN OVARIAN CYST: 4 TURNS OF TWISTS ABOUT A CASE AT THE SOUISSI MATERNITY CLINIC AND LITERATURE REVIEW.

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### ABSTRACT

The Torsion of annex represents with the extra uterine pregnancy the two great gynecological surgical emergencies. It affects all age groups from the antenatal period to menopause. It is almost always unilateral. Its association with pregnancy is far from being rare. The diagnosis of appendages torsion in its acute form is to be evoked every time a woman consults for pain of pelvic abrupt installation, especially when she is known having an adnexal tumor, often waiting for surgery. The association with an episode of vomiting is very suggestive in a woman with acute pelvic pain associated with an ovarian cyst.

Pelvic ultrasound should be done urgently. It is carried out by two methods (supra pubic and endo-vaginal). Its main interest is to visualize an adnexal pathological formation and understand its different parameters: size, structure, topography, associated signs.

The color pulsed echo -Doppler detects a decrease or even a clear stop of the vascular flow in the lombo-ovarian pedicle; Nevertheless, a normal Doppler does not eliminate an adnexal twist (60%).

The operative indication for laparoscopy must be applied urgently to preserve the function of the ovary in case of clinical semiology and ultrasound discovery of an adnexal tumor. It assures a triple role: diagnosis, prognosis and treatment by laparoscopy.

This way poses problems in ovarian tumor exceeding the umbilicus or in advanced term pregnancy. In 15% of cases, laparoconversion is practiced. The gesture on the twisted appendage will depend on the patient's age, the desire for pregnancy, and the evaluation of its vitality after detorsion and immersion in physiological saline at 37 ° C.

Conservative treatment is feasible in 70-80% of cases. Ovariopexy by plication of the utero-ovarian ligament should be reserved only for cases of twisting on perfectly normal appendages (in case of elongation of the utero-ovarian ligament) and in the case of recurrences. It should be noted that the twisting of a twisted appendix does not increase the thromboembolic risk postoperative. The subsequent fertility is correct with more than 70% of pregnancy occurring in women desiring a child.

**KEYWORDS:** torsion, cyst, ovarian, appendage.



## 1. INTRODUCTION

The adnexal torsion is a rare condition (2.7% of women, 5th in gynecological emergencies), secondary to total or partial rotation of the appendage around its vascular axis. The torsion may be favored by the existence of an adnexal mass (cyst of the ovary), by a previous tube ligature [1], or to be without cause. It usually occurs during genital life (70% of cases), but also during childhood or post-menopause. The torsion leads to lymphatic and venous stasis, congestion of the ovarian parenchyma, hemorrhagic infarction, and arterial thrombosis, which is responsible for hemorrhagic necrosis. Traditionally, the adnexectomy was performed in case of torsion due to the fear of fibrinolysis, peritonitis or vascular emboli after detorsion. Nowadays, after several series not having recovered this thrombotic risk [2, 3, 4], adnexal conservation is recommended for all women wishing to become pregnant, due to the frequent functional recovery (endocrine and germinal) of the ovary after detorsion. We will report the case of an ovarian cyst twist with 4 turns of twists at the Souissi maternity.

## 2. OBSERVATION

This case is about a 27-year-old patient with no significant antecedents of G2P2E2 admitted to emergency room in an acute abdomen table with diffuse pelvic pain of brutal and acute stabbing associated with nausea and vomiting with a preservation of the general state.

At the admission in the hospital, the patient had an arterial pressure TA: 11/7 with a pulse rate of 90 beats per minute; clinical examination illustrates diffuse sensitivity and a right pelvic mass beyond the umbilicus, hard and mobile.

The gynecological examination demonstrates a right lateral uterine mass very sensitive to the vaginal touch.

A conditioning was taken in. An ultrasound has been performed objectified an ovarian cyst of about 20 cm of major axis with 4 turns of twists. The patient has been taken to the operating room. A biological check-up revealed hemoglobin at 11g/dl, leukocytes at 9000 and platelets count at 170000 elt / mm<sup>3</sup>. The crase balance was normal. A laparotomy discovered a twisted right dermoid ovarian cyst of approximately 640g of 20 cm of major axis totally at the expense of the ovary, leading to an annex torsion of 4 turns of macroscopically greasy twists (Fig. 1), the left tube, the left ovary, and the uterus are of normal appearance. The patient had a right adnexectomy (Fig. 2) and the diagnosis was confirmed in the anatomopathology (Fig 3):



Fig 1: Ovarian mass taking all the right ovary



Fig 2: Annexectomy right visualizing the ovarian mass of 20cm with presence of 4 turns of twists to the exploration.



Fig 3: Specimen addressed for pathological examination

## 3. DISCUSSION

The adnexal twist is a rotation of the ovary and / or the fallopian tube around its vascular pedicle, often linked in adult to a causative ovarian mass and favored by anatomical variants such as a lumbo-ovarian ligament or a meso-salpinx too long [3].

It constitutes a surgical emergency because the ovarian vitality, and therefore the prognosis of fertility, is brought into play in case of therapeutic delay. The main risk factor for adnexal torsion is an antecedent of torsion but ovulation inductions, ovarian hyperstimulation syndromes, poly-microcystic ovarian syndromes and pregnancy have also been cited as risk factors [4]. The diagnosis is evoked due to acute pelvic pain, initially unilateral, variable and intermittent intensity, accompanied by digestive signs in more than 50% of cases (nausea, vomiting), making the etiologic orientation difficult because not specific to the diagnosis [5].

The presence of an inflammatory syndrome (hyperthermia, hyperleukocytosis ...) would reflect the already necrotic nature of the annex. Ultrasound is performed as a first intention and must be completed in the slightest doubt by a sectional imaging (scan or MRI) with higher diagnostic performance [6]. The visualization of a mass ovarian tumor in imaging, associated with a mass inter-utero-ovarian must evoke the diagnosis.

Causative ovarian tumors are of medium size and benign (functional cyst, serous or mucinous cystadenoma, dermoid cyst); adhesions and fibrous infiltration of endometriomas or malignant tumors limit the risk of torsion by fixing the ovary. The key diagnostic point is to identify the mass inter-utero-ovarian corresponding to the turgescence tube, a consequence of venous and lymphatic stasis. The visualization of the torsional vascular coil within this mass, thanks to the "whirlpool sign", is pathognomonic as is the case in our patient.



In sectional imaging, the grease is often infiltrated at the periphery of the twisted appendage. The twisted ovary can be moved medially or contralaterally, or remain in the usual topography. The existence of an adnexal vascularization to the Doppler does not exclude the diagnosis of ovarian torsion [7]. In case of suspected adnexal twisting, laparoscopic surgical exploration is recommended whatever the time of pain evolution [8]. During the laparoscopy, a tumorous ovary and an enlarged tube are identified, red and turgid, sometimes black as ischaemia. Patients with hormonal activity, after inspection of the 2 appendages, the surgical treatment consists of a simple untwisting of the appendix associated with cystectomy. There is no longer any indication of systematic adnexectomy [8,9,11], even if the annex does not recolor after untwisting, since functional recovery (endocrine function) is always possible and favored.

Indeed, Pansky et al. [10,12] demonstrated in an ovarian torsion population before menarche that 90% of the ovaries that were macroscopically ischemic in surgery (blue or black) found Doppler vascularization and normal macroscopic appearance only 6 weeks after detorsion. Ovaripexia is performed only in the case of an anatomical variant, but is not recommended systematically. In the menopausal patient, bilateral adnexectomy is the treatment of choice.

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#### 5. CONCLUSION

The annex twisting is a pathology frequently encountered in emergency. Their diagnosis requires a good knowledge of their semiology, which has benefited from the contribution of diagnostic models in recent years. Their management must be prompt with a mastery of laparoscopic techniques and be performed by gynecologist surgeons in order to be as conformist as possible, with a view to the subsequent fertility of the patients.

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