

Ultrasound Management of a Case of Tubo-Ovarian Abscess (TOA) Associated with a Pregnancy of 10 Weeks Gestation

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Abstract

In order to demonstrate the usefulness of the interventional ultrasound in the management of Tubo-Ovarian Abscess (TOA) associated with pregnancy, we report the case of a 29 year-old young woman, with no particular history in which was diagnosed a large left TOA in the context of a pregnancy of 10 weeks gestation. The therapeutic Puncture under ultrasound guidance was performed in an ultrasound room by the radiologist using the technique of "trocar". The procedure was marked by the setting of an infusion containing antispasmodics prescribed by the gynecologist and a strict asepsis of the area of intervention. It permitted the discharge of 450 cm³ of frank pus. The patient was discharged on antibiotics and pain relief after a normal embryonic ultrasound. Control at 24 h and at one week showed no complications. She gave birth vaginally at term to a eutrophic newborn. We conclude that, interventional ultrasound in the management of TOA associated with pregnancy is safe and effective. It helps avoid major surgery which may have repercussions on the fetus.

Keywords: Ultrasound-guided puncture; Tubo-Ovarian Abscess (TOA); Interventional radiology

Introduction

Tubo-Ovarian Abscess (TOA) is a common condition in women in genital activity [1]. But its association with pregnancy is exceptional [2-3]. If the diagnosis is easy thanks to advances in medical imaging [4], the management of ovarian abscess complicating pregnancy raises a problem. Antibiotics alone are not enough to treat the TOA. Surgical drainage and sometimes under ultrasound guidance is described in the literature [1]. But the fear of pregnancy loss due to surgical anesthesia limits the surgical procedure.

We report here the case of a large TOA complicating an ongoing mono-embryonic pregnancy of 10 weeks gestation that was successfully treated with a combination «antibiotics-therapeutic puncture under ultrasound guidance». Our objective was to emphasize the importance of the collaboration «radiologist-clinician» in the management of certain delicate diseases and show the relevance of interventional radiology in the management of adnexal pathologies associated with pregnancy.

Observation

Mrs. KM is 29 years old. She was paucipare and had no particular surgical or medical personal history. There was a notion of untreated leucorrhea a few weeks before her amenorrhea. Her HIV status was negative. She was referred to the radiology department of the Teaching Hospital of Yopougon for ultrasound exploration of a persistent pain in the left iliac fossa with fever of 38° in the context of a pregnancy of 10 weeks gestation. The ultrasound was performed with a General Electric sonograph (Logic 500) by suprapubic approach coupled with trans-vaginal approach with probes of respectively 4 and 6 Mhz. It confirmed the existence of a living intrauterine embryo of 10 weeks and 4 days of amenorrhea. It also objectified a left ovarian mass of echogenic fluid structure with a thick and regular wall of 104 mm in diameter and 450 cm³ in volume located in the left iliac fossa (Figure 1). The diagnosis of an ovarian abscess complicating an ongoing pregnancy was mentioned. The patient returned to her gynecologist who put her on antibiotics (2 g/d of amoxicillin-acid clavulanic plus 1.5 g/d of metronidazole during 21 days) and recommended an ultrasound control at the end of the treatment.

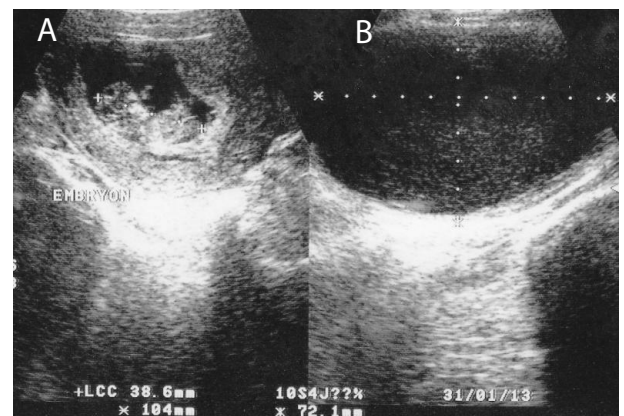


Figure 1: A: Living embryo of 10 WA B: Left ovarian abscess.

The ultrasound control objectified a lack of regression of the septic ovarian mass and the patient reported no improvement in clinical signs with pelvic pain that became more intense and throbbing. The fetus was alive with tachycardia (168 beats per minute). Together with the gynecologist we agreed to undertake an ultrasound-guided therapeutic puncture of the TOA supported by an utero-relaxing treatment initiated by the gynecologist (antispasmodic infusion and intramuscular progesterone delay) and preceded by a strict asepsis. The procedure consisted in a per-cutaneous puncture with a trocar under

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Figure 2: Same patient, the ultrasound-guided puncture discharging of frank pus in aseptic condition.

ultrasound guidance with complete evacuation of 450 cm³ of frank pus with a syringe (Figure 2), 10 cm³ of which were sent to the laboratory for analysis. The patient was placed under observation 24 hours after the procedure and on oral antibiotics (amoxicillin-acid clavulanic plus metronidazole). There was no complication. The control at D7 was satisfactory with total regression of clinical signs and the absence of intra-ovarian septic collection. Laboratory showed a polymicrobial collection (Chlamydia and gonorrhea). The patient was followed regularly until the end of pregnancy. She gave birth vaginally at term to a male newborn weighing 3200 grams with an APGAR of 10/10.

Comment

The management of the TOA is difficult. According to Garbin [5], antibiotic therapy is essential in the management of Tubo-Ovarian Abscess (TOA). Surgery is indicated firstly in severe forms (rupture, generalized peritonitis, septic shock). In uncomplicated forms, the evacuation of abscess (by puncture under imaging or laparoscopy) coupled with antibiotics leads to better cure rates than antibiotic therapy alone. Several surgical approaches are possible. Laparoscopy allows a shorter hospital stay with fewer wall complications and a suppression of fever faster than laparotomy [5]. Conservative surgery, performed by laparoscopy, provides high success rates with few complications. Exeresis surgery by laparoscopy or laparotomy, has a high rate of complications.

Trans-vaginal ultrasound-guided puncture is an alternative to drainage by laparoscopy with similar success rates. Well assessed, little morbid, it fits into the logic of therapy decrease. It can be proposed as first-line management of uncomplicated TOA [5]. In our case the TOA showed no complications. It was itself the complication of an ongoing pregnancy. But the surgical or laparoscopic procedure presents a risk for the development of the fetus because of anesthesia and / or carbon dioxide. Some authors have described malformation risks, spontaneous abortions and even low birth weight [6]. The only option we had left was puncture under imaging guidance. It is a simple and well tolerated procedure. Gjelland [7] states that the therapeutic puncture of TOA combined with antibiotic therapy is effective and even keeps fertility

in more than half of the cases. Our patient showed no post- procedure complications and the newborn was eutrophic. This has not been the case for Matsunaga [2] for whom the association «ovarian abscess and pregnancy» has resulted in the expulsion of the fetus at 22 weeks of amenorrhea. The author has treated the ovarian abscess with antibiotics only. He has not associated surgical treatment or ultrasound-guided drainage.

Conclusion

Tubo-Ovarian Abscess (TOA) complicating an ongoing pregnancy is rare and dreadful. Its management can be facilitated by interventional radiology. When combined with a broad-spectrum antibiotic therapy that is supported by a good protocol of antispasmodic treatment and a good asepsis, ultrasound-guided puncture of TOA is effective and well tolerated by both the mother and the fetus. Here we have the opportunity to encourage a multidisciplinary approach of the management of delicate diseases of women.

References

1. Granberg S, Gjelland K, Ekerhovd E (2009) The management of pelvic abscess. *Best Pract Res Clin Obstet Gynaecol* 23: 667-78
2. Matsunaga Y, Fukushima K, Nozaki M, Nakanami N, Kawano Y et al. (2003) A case of pregnancy complicated by the development of a tubo-ovarian abscess following in vitro fertilization and embryo transfer. *Am J Perinatol* 20: 277-82.
3. Erdem M, Arslan M, Yazici G, Erdem A, Gursoy R (2002) Incidental tubo-ovarian abscess at abdominal delivery: a case report. *J Matern Fetal Neonatal Med* 12: 279-80.
4. Lee DC, Swaminathan AK (2011) Sensitivity of ultrasound for the diagnosis of tubo-ovarian abscess: a case report and literature review. *J Emerg Med* 40: 170-5.
5. Garbin O, Verdon R, Fauconnier A (2012) Prise en charge des abcès tubo-ovariens. *Journal de gynécologie-obstétrique et biologie de la reproduction*. 41: 875-885.
6. Reedy MB, Kallen B, Kuehl TJ (1997) Laparoscopy during pregnancy: a study of five fetal outcome parameters with use of the Swedish Health Registry. *Am J Obstet Gynecol* 177: 673-9.
7. Gjelland K, Granberg S, Kiserud T, Wentzel-Larsen T, Ekerhovd E (2012) Pregnancies following ultrasound-guided drainage of tubo-ovarian abscess. *Fertil Steril* 98:136-40.