



Mucinous Cystadenoma of the right ovary in a pregnant patient: A case report

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ABSTRACT

Ovarian mucinous cystadenoma is a proliferation of the germinal epithelium of the ovary that can take on huge proportions. When related to pregnancy, it increases even more its complexity, while generating complications both in fetal growth and in women's health. Thus, this study aims to report a case of mucinous cystadenoma of the right ovary in a pregnant patient with subsequent surgical removal. For this, the present study refers to an observational, descriptive study, of a case report type, based on the evaluation of the patient's medical record, to elucidate the form of treatment and the importance that the diagnosis had in the outcome of this situation.

Keywords: Gynaecology, Case report, Tumor, Ovarian cyst, Mucinous cystadenoma, Ovary, Gestation.

1 INTRODUCTION

Mucinous ovarian cystadenoma is one of the main ovarian pathologies of epithelial origin, and is known for its characteristic of reaching large dimensions.⁽¹⁾

The relationship between ovarian tumors and pregnancy is relatively common, it is estimated that 1 in every 1,000 women will be diagnosed with ovarian tumor during pregnancy, most of which are of epithelial or germline origin.⁽²⁾ Patients with benign tumors do not have significant symptoms that make them seek medical help, which is one of the factors that leads to the exacerbated growth of many of these adnexal masses and their consequent late identification. One of the major concerns regarding the growth of the cyst in conjunction with a pregnancy is fetal involvement.⁽³⁾

This study, approved by the local research ethics committee, opinion number 5,046,310, aims to report the management of a mucinous cystadenoma of the right ovary in a pregnant patient, which may help the early treatment of these patients, in order to avoid possible maternal-fetal complications. This study follows the CARE guideline.

2 CASE DESCRIPTION

A 20-year-old Caucasian female patient, born in Santa Catarina, pregnant, nulliparous, using folic acid and vitamin and mineral food supplement (omater gest ®), denies comorbidities and allergies. At 13 weeks of gestation, the patient seeks emergency care complaining of pain in the lower abdomen and small amount of borgrainous vaginal discharge. She mentions that she was diagnosed with mucinous ovarian

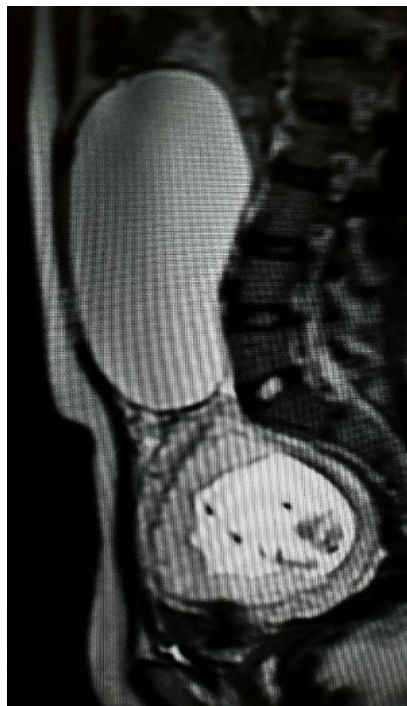


cystadenoma during prenatal consultations. The patient is referred to the obstetric center with systemic blood pressure of 138 x 50 mmHg, heart rate of 125 bpm, uterine fundus height of 24 cm and specular examination without active bleeding, and hospitalization is requested.

On day 1 of hospitalization, 1st trimester ultrasound and magnetic resonance imaging (MRI) of the pelvis are requested (Figure 1) with the following report: voluminous cystic formation in the abdominal cavity, near the midline, predominantly in the mesogastric region, measuring about 15.8 x 7.6 x 17.6 centimeters of undetermined nature and origin, and may be related to an ovarian adnexal cyst or even mesenteric inclusion cysts. Absence of lymph node enlargement in the pelvis and prescription of analgesics. In addition, recent laboratory tests of the patient show alpha-fetoprotein 4,8; carcinoembryonic agent (CEA): 0.9; CA 125: 24.4; lactate dehydrogenase (LDH): 231. On the third day of hospitalization, the repetition of the tests showed LDH: 135; BHCG > 258400; CEA 0.76.

On the fourth day of hospitalization, the US result revealed a gestational age of 13+4, topical pregnancy, low anterior placenta, nuchal translucency 1.0, nasal bone present, normal amniotic fluid, no morphological alterations, with the presence of a right adnexal cyst. After analyzing the complementary exams, it was decided, among the medical staff, to perform laparotomy for right adnexectomy. On the fifth day of Evolution: Tests showed evolution of alpha-fetoprotein 34; CEA 0.76; CA 125: 22 and LDH 135.

Figure 1. Mucinous cystadenoma of the ovary of large proportion above the uterus, already occupying a large space in the abdominal cavity.



In the preanesthetic evaluation, the patient denies any history of anesthetics. ASA II (*American*

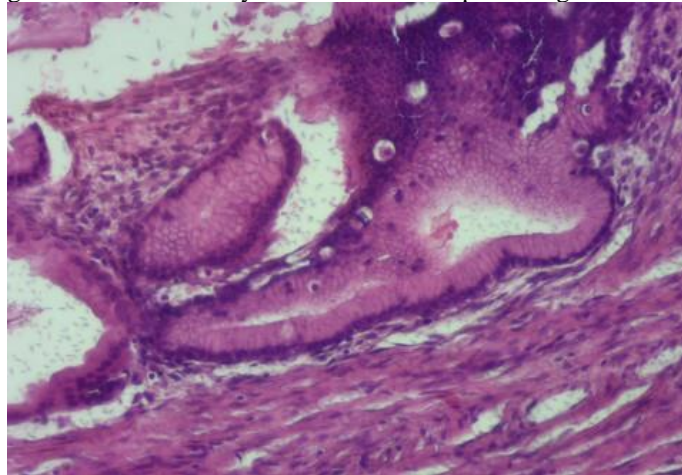


Society of Anesthesiology) classification, with functional capacity of 4 mets, normal cardiac auscultation with two-stroke normophonetic sounds, regular R-R interval and no murmurs. No predictor of difficult airway, classified on the Mallampati III Scale. Thus, the anesthetic approach adopted was neuraxial block (spinal anesthesia) and sedation.

On the eighth day of hospitalization, laparotomy surgery with right oophorectomy was performed due to an adnexal cyst. The surgery lasted two hours and four minutes, and a transumbilical median incision was made with collection of peritoneal lavage with subsequent clamping, sectioning and ligation of the right uterine horn. The specimen was referred to an anatomopathological examination where the diagnosis of Mucinous Cystadenoma in the Right Ovary was confirmed (Figure 2). The patient progressed well without intraoperative and postoperative complications. On the second postoperative day, the patient was discharged from the hospital.

Five months after laparotomy, the patient returns to the hospital with pain in the lower abdomen and fluid loss. Then, an uneventful vaginal delivery was performed, with 1st degree laceration on the left lip. Newborn is born alive, assisted by the pediatrician on duty. The patient after placental delivery presented moderately increased bleeding, and the cervix without lacerations was reviewed. The bleeding was resolved with bimanual massage and the patient was stable and referred for recovery.

Figure 2 — Mucinous cystadenoma. Mucin-producing colunar cells



3 DISCUSSION

Anatomically, the ovaries are structures suspended bilaterally to the uterus, among the supporting structures of the ovary are the utero-ovarian ligament, the suspensory ligament of the ovary and the wide ligament. The ovary is formed by the outer cortex, where follicles and eggs are located, and by the medulla where a fibromuscular layer is composed of connective tissue and blood vessels. This structure is composed of several histological forms, and tumors most commonly form in the epithelial tissue layer.



The most common types of tumors in patients of reproductive age are mature cystic teratoma, followed by serous cystadenoma and then mucinous cystadenoma, so the latter is rarer to occur, especially during pregnancy. Ovarian neoplasms can arise from stem cells, which normally give rise to the superficial epithelium, germ cells, or sex cord stromal cells.⁽⁴⁾

The occurrence of mucinous cystadenoma in pregnant women is relatively rare in modern medicine due to the advancement of early diagnostic factors, such as ultrasonography, one of the greatest risks for women with this diagnosis is the risk of malignancy, however the probability of malignancy is low.⁽²⁻⁵⁾

Symptoms are non-specific, usually due to the formation and growth of a mass in the ipsilateral pelvic region next to the affected ovary. The average size of a mucinous tumor is 18 cm, but it can reach higher numbers depending on the clinical evolution of the patient. For diagnosis, the use of tumor markers for ovarian cancer, such as CA-125, has a low specificity for premenopausal women, since high levels may be present in benign disorders such as mucinous cystadenoma. It's reasonable that there should be a period of observation in patients of reproductive age in terms of mobility, regularity, and unilaterality of the adnexal mass that excludes tumor malignancy. Imaging tests such as doppler or non-doppler ultrasonography and magnetic resonance imaging or computed tomography can be used. The diagnosis is made after exploratory laparotomy with biopsy after removal of the ovary. Biopsy is not recommended without removal of the affected area, due to the risks of dissemination of tumor cell contents through the pelvic cavity. With post-surgical staging through the FIGO (International Federation of Gynecology and Obstetrics) staging system, a prognosis of this patient can be made, which, in mucinous cystadenomas, is usually positive.⁽⁶⁾

Oophorectomy instead of removing the cyst site decreases the chances of cyst recurrence. This procedure can increase patient survival by up to 98% at 5 years and 96% at 10 years. Mucinous tumors are rare, with serous tumors being more common. The clinical picture of mucinous tumors differs from others in that they grow rapidly and can reach large sizes.⁽⁷⁾

4 CONCLUSION

Here we report the case of a pregnant patient diagnosed with Mucinous Ovarian Cystadenoma during the first month of pregnancy, in which the patient underwent removal surgery during pregnancy without posing risks to the fetus, despite the large size of this cyst. Adnexectomy surgery provides a better quality of life to the mother and greater safety in conducting pregnancy, without the need to expose the fetus to conditions such as fetal growth restriction, obstruction of the birth canal or low birth weight, in addition to preventing complications such as cyst rupture, which from the release of mucinous content in the peritoneal cavity can evolve with a picture of peritoneal pseudomyxoma causing damage to both the mother and the mother. to the fetus. The risk to which both mother and child are exposed when choosing a conseval treatment in these cases is great, so we emphasize the importance of surgical management as a therapeutic option for



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