

Giant Borderline Mucinocystadenoma in A Woman Of 46 Years-Old. Clinical Case.

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ABSTRACT

Introduction. Ovarian cysts more than 10 cm in dimension are labeled as giant ovarian cysts. Mucinous cystadenomas have the potential to grow into huge mass and rarely remain undiagnosed till they become giant ovarian cysts, they are incidentally found on routine physical examination. Mucinous tumors constitute of benign 75%, borderline 10% and malignant lesions 15%. Giant ovarian tumors generally pose risk due to their location and pressure effects on surrounding structures. **Clinical case.** A 46-year-old female patient who comes to the consultation because presents a progressive increase in volume of the abdominal region of more than two years of evolution. She presents with dyspnea, low back pain on walking and constipation. An MRI of the abdomen is requested where the abdominal and pelvic cavity is found occupied by a multilocular tumor measuring 297 x 340 x 198 mm, with thin and fine walls, some with internal septa, the signal intensity within the cystic lesions is variable within the different sequences made, but with characteristics of liquid content; with contrast medium applications there is diffuse reinforcement of the wall of the lesions without observing undulations or papillary projections. Unaltered uterus; the anatomical delimitation of both ovaries is not possible due to the characteristics and size of the lesion. **Laboratory studies:** were normal. **Altered antigens.** Exploratory laparotomy + salpingo-oophorectomy bilateral are performed. A transoperative study of the tumor was carried out, which reported: borderline seromucinous cystadenoma, measuring 44 x 36 x 30 cm and weighing 10,170 kg. **Discussion.** The differential diagnoses of benign ovarian cysts include dermoid cysts, Brenner cysts, and mucinous cysts. Dermoid cysts are sac-like growths on ovaries containing fat, hair, and other tissue types. Brenner cysts are found incidentally and are solid outgrowths on the ovarian surface. Of all the ovarian tumors, mucinous cystadenomas account for 15-20%. These tumors arise from the ovarian surface epithelium and have smooth inner and outer thin walls.

Keywords: Giant ovarian tumors, Giant ovarian cyst, Mucinous cystadenoma, Ovarian cystic formations, Partial bowel obstruction, Premenopausal patient.

INTRODUCTION

Ovarian cysts more than 10 cm in dimension are labeled as giant ovarian cysts. Mucinous cystadenomas have the potential to grow into huge mass and rarely remain undiagnosed till they become giant ovarian cysts, they are incidentally found on routine physical examination. Mucinous tumors constitute of benign 75%, borderline 10% and malignant lesions 15%. Giant ovarian tumors generally pose risk due to their location and pressure effects on surrounding structures. They can undergo a malignant transformation as well. Even though their symptomatology is vague they can cause serious complications such as torsion, rupture, and ascites and due to their expanding size led to higher grades of dyspnea ¹. These tumors are generally asymptomatic at early stages, causing symptoms only after reaching enormous dimensions, and consequently are diagnosed late in low and middle-income countries. Compressive symptoms or a visible abdominal mass are the most frequent presenting

complaints. Benign mucinous cystadenomas make up the majority (81%) of mucinous tumors. Benign mucinous cystadenomas make up the majority (81%) of mucinous tumors. These tumors can grow to extremely large sizes, and are among the largest of any recorded tumor in the body, as was the case with our patient. They usually occur as large multicystic masses with mucus-containing fluid, presenting commonly in women in their 20s to 40s. The large size can itself be suggestive of mucinous histology ²⁻⁴. Mucinous cystadenomas are a common benign neoplasm of the ovaries that can grow much larger than other adnexal masses; they are recognized as precursors of ovarian cancer and may slowly transform to borderline tumors and invasive ovarian cancer. Prompt and accurate treatment is essential as these tumors can grow to massive sizes and be potentially lethal if left untreated. Health care providers must understand the patient, their expectations and their problems; without proper communication and follow-up, any treatment is destined to disappoint ⁵.

CLINICAL CASE

A 46-year-old female patient who comes to the consultation because she presents a progressive increase in volume of the abdominal region of more than two years of evolution. She presents with dyspnea, low back pain on walking and constipation. No hereditary family history, non-pathological personal and pathological personal history without relevance to the current condition. Gyneco-obstetric history: gynecologic and obstetric history: menarche 13 years, regular rhythm 30 x 4 days, beginning of active sexual life 14 years; number of sexual partners two; date of last menstruation 11/20/2022, G3; P1; C2; bilateral tubal occlusion 23 years ago. Last Pap smear performed: 11/12/2022. Previous cesarean sections two. An MRI of the abdomen is requested where the abdominal and pelvic cavity is found occupied by a multilocular tumor measuring 297 x 340 x 198 mm, with thin and fine walls, some with internal septa, the signal intensity within the cystic lesions is variable within the different sequences made, but with characteristics of liquid content; with contrast medium applications there is diffuse reinforcement of the wall of the lesions without observing undulations or papillary projections. Unaltered uterus; the anatomical delimitation of both ovaries is not possible due to the characteristics and size of the lesion. Gastrointestinal tract displaced by mass effect. There is no free fluid in the pelvic cavity. Conclusion: Abdominopelvic tumor of the mucinous cystadenoma type. Laboratory studies: blood count, blood chemistry, and liver function test, were normal, CA-125 Antigen > 600 U/ml (15 to 20); 19-9 Antigen < 3.00 U/ml (< 37); α -fetoprotein 2.36 ng/mL (< 40); Carcinoembryonic Antigen 1.08 ng/mL (0 to 2.5). It is scheduled for surgical intervention where exploratory laparotomy + salpingo-oophorectomy bilateral are performed. A transoperative study of the tumor was carried out, which reported: Borderline seromucinous cystadenoma, measuring 44 x 36 x 30cm and weighing 10,170 kg.



Description in the text

DISCUSSION

Epithelial tumors of the ovary represent 65-75% of all ovarian tumors. They may originate from tube, endocervix, and endometrium or bladder epithelium. Mucinous cystadenomas make up 15-20% of all epithelial tumors. It's reported to occur in middle-aged women. It's rare among adolescents/teenager or in association with pregnancy. On gross appearance, mucinous tumors are characterized by cysts of variable sizes without surface invasion. They could reach large size before being discovered but this does not necessarily indicate malignancy, even when they reach a diameter of 50 cm or more and weigh 50 to 150 kg. On average, the mucinous tumors measure 15 to 30 cm in diameter. Only 10% of primary mucinous cystadenomas are bilateral. These tumors are divided into three different categories: benign, borderline and malignant. The benign mucinous tumors represent 40% of all benign ovarian neoplastic, reaching sizes between 15-30 cm in diameter and they have a 10 years survival rate of 100%. The borderline tumors have a low malignant potential and they have an extra-ovarian spread of about 10% and the 10 years survival rate is about 60%. The third group is that of the malignant tumor; these tumors are more frequent under the age of 20 years and over 60 years representing 90% of all malignant ovarian tumors with a 10 years survival rate of about 30-40%⁶. The differential diagnoses of benign ovarian cysts include dermoid cysts, Brenner cysts, and mucinous cysts. Dermoid cysts are sac-like growths on ovaries containing fat, hair, and other tissue types. Brenner cysts are found incidentally and are solid outgrowths on the ovarian surface. Of all the ovarian tumors, mucinous cystadenomas account for 15-20% [2]. These tumors arise from the ovarian surface epithelium and have smooth inner and outer thin walls. Specifically, benign mucinous cystadenomas comprise 80% forming the majority of ovarian mucinous tumors; 10% of these tumors are found to be malignant and the remaining 10% are borderline^{7, 8}. Ovarian tumors are the most common gynecological neoplasms, with a prevalence of 2.5–6.6% in a woman's lifetime, and are the 8th leading cause of cancer mortality among women worldwide. Ovarian neoplasms present in a variety of subtypes and origin of tumor cells, with surface epithelial-stromal cell tumors being most frequent at 65–70%. Among them, mucinous cystadenoma is a benign cystic ovarian tumor originating from the surface epithelium of the ovary, characterized by mucin production and classified into benign (80%), borderline or low malignant potential (10%), and invasive (10%) subtypes. Mucinous cystadenomas occur most commonly in third to sixth decades of life, but rare cases in younger and older women have also been reported^{9, 10}. According the ESGO/ISUOG/IOTA/ESGE Consensus Statement on preoperative diagnosis of ovarian tumors, ultrasonography is indicated as a first step in stratifying patients with symptoms that suggest an adnexal mass, as well as those who have an adnexal mass accidentally discovered on imaging. An experienced sonographer should perform any ultrasonographic examination in the case of a suspected ovarian mass. The Consensus also took further steps to distinguish the malignancy and the disease's extent. The tumor marker profile (CA 125 and CEA, complemented with other markers in specific circumstances) in combination with an expert's ultrasound assessment can often reveal the precise subtype of malignancy. Diagnosis of the primary tumor can be assessed with MRI and before any scheduled surgery for suspected malignancy, a CT scan of the chest, abdomen, and pelvis is required to rule out secondary malignancies, thromboembolic events, and multifocal intraparenchymal distant metastases that would make resection impossible^{11, 12}. Giant ovarian tumors are a known entity, but very rare in developed countries given that most ovarian masses are discovered early on routine medical visits. Most reported cases are from developing regions such as India or Africa. Mucinous cystadenomas are typically unilateral, benign tumors of epithelial origin lined by tall columnar, non-ciliated epithelial cells

with apical mucin and basal nuclei. In a 20-year retrospective study of ovarian teratoma, Caruso et al. document 305 cases of ovarian teratoma, of which only 4 were found in association with mucinous cystadenoma¹³⁻¹⁵. Sanna E et al.,¹⁶ describe, for the first time, a case of a large 10 kg multilocular presumed benign ovarian mass that was successfully treated via laparoscopic salpingo-oophorectomy, followed by the external drainage of the cyst without tumor spillage. Laparoscopy is the gold standard treatment for presumed benign ovarian cysts that range between small and moderate in size. However, there are currently no standard guidelines or consensus for how to manage large (> 10 cm) and very large (up to the umbilicus) ovarian cysts and what the maximum ovarian cyst size should be for safe and effective laparoscopic management. The main concern regarding laparoscopic management of giant ovarian cyst is the potential risk of the capsular rupture of an unexpected ovarian cancer, resulting in cyst content spillage into the peritoneum and subsequent seeding. This has resulted in the reluctance of performing minimally invasive surgery in women with large adnexal masses. However, a laparoscopic approach has been increasingly preferred due to current advances in mini-invasive surgery, including the introduction of innovative devices and techniques that have been shown to avoid tumor spillage, result in shorter hospital stays, provide better cosmetic results, and are well known for being minimally invasive^{17, 18}. To construct and validate a combined Nomogram model based on radiomic and semantic features to preoperatively classify serous and mucinous pathological types in patients with ovarian cystadenoma. Pan S et al.¹⁷, recruitment a total of 103 patients with pathology-confirmed ovarian cystadenoma who underwent CT examination were collected from two institutions five optimal features were ultimately selected and contributed to the Radscore construction. Unilocular/multilocular identification was significant difference from semantic features¹⁹. The Nomogram model showed a better performance in both training cohort (AUC = 0.94, 95%CI 0.86–0.98) and external validation cohort (AUC = 0.92, 95%CI 0.76–0.98). The calibration curve and DCA analysis indicated a better accuracy of the Nomogram model for classification than either Radscore or the locus alone. In this study, we established and validated a Nomogram model for classification of ovarian cystadenoma, which incorporated five robust radiomic features extracted from contrast-enhanced CT and the semantic features. The Nomogram model achieved a better performance in both training cohort and validation cohort with a larger AUC value than the radiomic model or locus alone, suggesting the reliability of the improved model for classification of ovarian cystadenoma^{20, 21}.

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