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Giant Borderline Mucinous Cystadenoma in a Multiparous Woman: A Case Report

Giant Borderline Mucinous Cystadenoma pada Seorang Wanita Multipara: Sebuah Laporan Kasus

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ABSTRACT

Cystic lesions with loculi lined with mucin-producing epithelium are mucinous ovarian tumors. Approximately 10% of these are borderline tumors. These cysts are commonly found in 30-50 year olds. Ovarian cysts exceeding 10 cm in diameter are called giant ovarian tumors. This study aims to present a case of Giant Borderline Mucinous Cystadenoma in a multiparous woman. Report a case of a 38-year-old woman P3A0 presenting with an enlarged abdomen for approximately 1 year and tightness 1-month SMRS, which was later diagnosed as Giant Borderline Mucinous Cystadenoma. Mucinous cystadenoma has the potential to grow into a large mass and rarely goes undiagnosed until it becomes a giant ovarian cyst (>10 cm). Total Abdominal Hysterectomy, Salpingo Oophorectomy Sinistra, right salpingectomy, right partial oophorectomy, ascitic fluid aspiration, left pelvic lymphadenectomy, and omentectomy were performed. Transabdominal Ultrasound showed a mixechoic image of the adnexa with a size of 23.2 cm x 15.9cm x 27 cm with a volume of 5265 cc. PA result showed borderline cystadenoma mucinous. The therapeutic strategy was guided by FIGO classification, age, and the patient's desire to have children. Early recognition and management are crucial to prevent disease progression and reaching giant tumor size.
Keywords: Giant borderline mucinous, cystadenoma, multiparous, hysterectomy

ABSTRAK

Lesi kistik dengan lapisan *lokuli* yang memiliki epitel penghasil musin merupakan tumor ovarium musinosa. Sepuluh persen diantaranya adalah jenis *borderline*. Kista ini umumnya ditemukan pada berusia 30-50 tahun. Kista ovarium yang diameternya melebihi 10 cm disebut *giant ovarium tumor*. Tujuan penelitian ini adalah untuk membahas sebuah kasus *Giant Borderline Mucinous Cystadenoma* pada seorang wanita multipara. Penelitian ini menggunakan desain laporan kasus yang bertujuan untuk menggambarkan secara rinci suatu kasus klinis. Laporkan kasus seorang wanita berusia 38 tahun, P3A0, yang datang dengan keluhan perut membesar sejak kurang lebih satu tahun dan sesak selama satu bulan sebelum masuk rumah sakit (SMRS), kemudian didiagnosis sebagai *Giant Borderline Mucinous Cystadenoma*. *Kistadenoma musinosa* berpotensi tumbuh menjadi massa besar dan jarang tidak terdiagnosis hingga menjadi kista ovarium raksasa (>10 cm). Dilakukan Total *Abdominal Hysterectomy Salpingo Oophorectomy Sinistra*, *salpingektomi* kanan, *partial ooforektomi* kanan, aspirasi cairan *asites*, *limfadenektomi pelvis* kiri, dan *omentectomy*. *Transabdominal Ultrasound* menunjukkan gambaran *mixechoic* pada *adneksa* dengan ukuran 23,2 cm x 15,9cm x 27 cm dengan volume 5265 cc. Hasil PA menunjukkan *cystadenoma mucinosum borderline*. Strategi terapi dipandu oleh klasifikasi FIGO, usia, dan keinginan pasien untuk memiliki anak. Pengenalan dan tatalaksana dini mencegah penyakit memburuk dan mencapai ukuran tumor raksasa.
Kata Kunci: *Giant Borderline Mucinous*, kistadenoma, multipara, histerektomi

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INTRODUCTION

Ovarian cysts are commonly diagnosed in routine gynecological examinations and are the leading cause of pelvic masses.[1] The risk of being diagnosed with an ovarian tumor is approximately 1% to 1.5%.

Cystic lesions with loculi lining mucin-secreting epithelium, which appear like endocervical glands and gastrointestinal epithelium, are mucinous ovarian tumors.[2] These tumors have the potential to grow to massive sizes, occasionally occupying the entire abdominal cavity. Benign mucinous cystadenomas account for approximately 15% of all ovarian neoplasms, which are among the largest tumors recorded. About 80% of mucinous tumors are benign, 10% are borderline, and 10% are malignant, of which 80% are metastatic, with the gastrointestinal tract being the primary site in 45% of cases; other organs, such as the pancreas and breast, may also be involved.

These cysts are commonly found among patients aged 30-50 years. Ovarian cysts exceeding 10 cm in diameter are called giant ovarian tumors.[3] Management of ovarian tumors starts with an assessment of the potential malignancy of the tumor based on a malignancy risk index that depends on menopausal status, ultrasonography results, and Ca-125 levels.[4] Surgical intervention is based on the patient's age, menopausal status, and presence of other underlying diseases, with open or laparoscopic surgical techniques.

We report the case of a 38-year-old woman, P3A0, who presented with an enlarged abdomen for approximately 1 year and tightness for 1 month SMRS, which was later diagnosed as Giant Borderline Mucinous Cystadenoma.

MATERIALS AND METHODS

This study uses a case report design, which aims to describe in detail a clinical case. Data for this case report was obtained using a synthesis of clinical and diagnostic methodologies. Anamnesis was taken to obtain information regarding the patient's complaints and symptoms, history of the patient's illness, and family health background. A thorough physical examination, including general, abdominal, and pelvic examinations, was performed to determine the patient's health. Diagnostic evaluation consists of imaging modalities, including transabdominal and transvaginal ultrasonography, to evaluate the dimensions, morphology, and attributes of the pelvic mass. Laboratory examinations include measuring the tumor marker CA-125 to evaluate the risk of malignancy. Anatomical pathology is performed through histological examination of the postoperatively removed tissue to ensure a clear diagnosis.

The patient gave written informed consent to be treated and for this case report to be published. To preserve patient privacy, the patient's identity and information have been hidden. The Declaration of Helsinki's ethical guidelines were followed in this research. The analysis in this study is descriptive. Clinical data were interpreted based on the patient's history, physical examination, imaging findings, tumor marker levels, and intraoperative observations. The decision to perform surgery was guided by several high-risk features, including the presence of a mass larger than 10 cm, complex or

solid components on ultrasonography, and elevated CA-125 levels, all of which suggest a potential risk of malignancy. In line with management protocols for suspected malignant ovarian tumors, surgical staging was performed, including total abdominal hysterectomy with left salpingo-oophorectomy, right salpingectomy, partial right oophorectomy, omentectomy, aspiration of ascitic fluid, and lymphadenectomy. The decision to preserve the right ovary was made based on the patient's refusal of bilateral oophorectomy.

RESULT

A 38-year-old woman, P3A0, presented with an enlarged abdomen for approximately 1 year and tightness for 1-month SMRS, then finally decided to see a doctor. The patient had no history of surgery or contraceptive use. A convex abdomen was found on physical examination, and a cystic mass was palpated in the abdomen as high as three fingers below the processus xiphoid. Transabdominal Ultrasound (TAUS) result in Figure 1 showed a uterus with a normal shape and size impression; there was a mixed choice picture in the adnexa with a size of 23.2 cm x 15.9cm x 27 cm with a volume of 5265 ccs.

Figure 2 illustrates the intraoperative findings during the surgical staging procedure, which included Total Abdominal Hysterectomy Salpingo Oophorectomy Sinistra (TAHSOS), right salpingectomy, and right partial oophorectomy, ascitic fluid aspiration, left pelvic lymphadenectomy, and omentectomy. Bilateral oophorectomy was not performed as the patient was unwilling to have both ovaries removed. During the procedure, the left ovary was found to weigh 4.5 kg with a size of approximately 30 cm x 22 cm. Anatomic pathology examination revealed cystadenoma mucinous borderline.

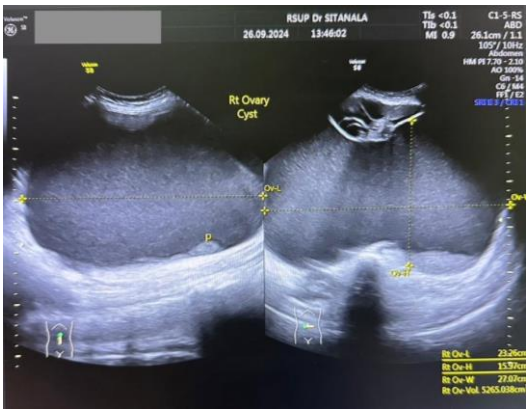

Figure 1. Transabdominal Ultrasound showed a uterus with normal shape and size impression; there was a mixechoic picture in the adnexa with a size of 23.2 cm x 15.9cm x 27 cm with a volume of 5265 cc

Figure 2. Intraoperative finding of a left ovary weighing 4.5 kg and measuring approximately 30 cm x 22 cm

DISCUSSION

Mucinous ovarian tumors account for 15% of all ovarian neoplasms. Mucinous tumors consist of benign (75%), borderline (10%), and malignant

(15%) tumors.[5,6] Mucinous tumors are filled with sticky gelatinous fluid.[7,8] Most are unilateral, well-differentiated, and, if diagnosed at stage I, have a recurrence rate of 1%.[9] Age is the most important independent risk factor. Mucinous tumors are common in women between the ages of 30 and 50. During this age range, ovarian activity begins to decline but has not completely ceased due to hormonal changes. Estrogen levels are still high enough to promote epithelial proliferation despite the decrease in hormone synthesis. Mucinous cystadenomas and other borderline ovarian tumors may form as a result of this disease. However, cases in postmenopausal women have also been reported. The frequency of ovarian cysts increases with age during adolescence, ranging from 3.8-31.3%. Risk factors for ovarian cysts include pregnancy, hypothyroidism, smoking, and infertility therapy.[10] Patients treated with gonadotropins or other ovulation induction agents may develop cysts as part of ovarian hyperstimulation syndrome.[11,12] In this case, the patient was a 38-year-old P3A0 woman within the epidemiologic range in the literature. The patient had no history of surgery or contraceptive use.

Ovarian cysts above 10 cm in size are referred to as giant ovarian cysts.[13] Mucinous cystadenomas have the potential to grow into large masses and rarely go undiagnosed until they become giant ovarian cysts. These cysts are discovered incidentally on routine physical examination and sonogram.[14] On physical examination, a convex abdomen is found, and a cystic mass is palpated in the abdomen at the height of 3 fingers below the processus xiphoid.

Ovarian cystic masses with borderline architecture >10% are categorized as borderline ovarian tumors.[15] Among such tumors, serous (50%) and mucinous (45%) subtypes were the most common. Mucinous borderline ovarian tumors are categorized into intestinal type (85%) and seromucous type (15%), which can progress to invasive mucinous carcinoma if left untreated.[16]

Giant ovarian tumors generally pose a risk due to their location and the effect of pressure on surrounding structures. Although symptoms are vague, these tumors can cause serious complications such as torsion, rupture, and ascites and, due to their enlarged size, cause more severe dyspnea.[17] Bloating, constipation, intestinal ischemia, hydronephrosis, heart failure, and deep vein thrombosis have been reported as symptoms of compression. However, in some cases, the diagnosis is incidental. In this case, the patient had shortness of breath for 1-month SMRS and ascites due to its large size.

Pelvic and abdominal imaging examinations are required for diagnosis. Transabdominal Ultrasound (TAUS) is preferred as the first-line imaging modality, allowing accurate identification in approximately 90% of cases. However, more advanced modalities such as CT (Computed Tomography) scans and Magnetic Resonance Imaging (MRI) provide more reliable information about the mass and nearby anatomical structures.[18] Although tumor markers, such as CA 125 and CAE, can be useful tools to differentiate malignant ovarian tumors, they should not be used alone because they may also be elevated in some benign tumors.[19] TAUS in the case showed a uterus of

normal shape and size, with a mixechoic appearance in the adnexa measuring 23.2 cm x 15.9cm x 27 cm with a volume of 5265 cc. With this size, the tumor is classified as a 'giant' size.

Various histopathological patterns and symptom variability are typical characteristics of giant ovarian tumors. Although the majority are mucinous type, varying degrees of malignancy are reported in the literature, with different borderline type patterns reflecting prognosis. A recent revision of borderline ovarian tumors detected approximately 36% of cases showing intraepithelial carcinomatous, in varying percentages, showing areas of cell proliferation of four or more layers, or containing foci of scattered stroma-free cribriform or papillary structures, or showing moderate or heavy atypical nuclei evenly distributed in the epithelial layer. Different from invasive ovarian tumors, borderline tumors are usually unilateral and rarely associated with pseudomyxoma peritonei, even when intraoperative rupture occurs during surgery. Less than 10% of borderline mucinous tumors are bilateral, and this should be suspected for possible metastasis.[20] In this case, the anatomical pathology examination resulted in borderline cystadenoma mucinosum.

Although the prognosis of mucinous carcinoma is poor, the prognosis of borderline mucinous tumors is good, including cases with stromal micro invasion, according to the FIGO classification. Nonetheless, patients with borderline ovarian tumors require long-term follow-up and evaluation as tumors are reported to recur up to 20 years after initial diagnosis. Careful follow-up of these patients through pelvic MRI may be important to monitor recurrence or disease progression.[21] In addition, lesion weight is not associated with the risk of malignancy, as shown by histopathological analysis.[22] At the time of the procedure, the left ovary weighed 4.5 kg and measured approximately 30 cm x 22 cm.

The treatment strategy is guided by the FIGO classification, age, and the patient's desire to have children. For patients with grade I FIGO tumors (confined to the ovaries), if fertility is not required to be preserved, a hysterectomy with bilateral salpingo-oophorectomy can be performed. If the patient wishes to preserve fertility, unilateral salpingo-oophorectomy can be applied. An important aspect of surgical therapy is to ensure complete removal of the lesion while avoiding rupture of the tumor capsule during surgery, which may increase the risk of disease progression and recurrence.[23]

The gold standard of treatment for any suspected ovarian mass includes complete removal of the involved adnexa with intraoperative pathological evaluation, usually laparotomy, total hysterectomy, bilateral salpingo-oophorectomy, and staging procedures, including lymphadenectomy. Giant ovarian tumors should be removed to relieve compressive symptoms, establish the final diagnosis, and determine surgical staging. In abdominal surgery, care should be taken to remove the ovary intact without spilling the cyst contents, as rupture of stage I mucinous ovarian carcinoma may increase the potential for recurrence. Cystectomy, salpingo-oophorectomy, and total hysterectomy with bilateral salpingo-oophorectomy can be used to treat giant borderline

ovarian tumors. Laparoscopy is safe and efficient, with reduced postoperative pain and shorter hospital stays than laparotomy.[24,25] Adequate supportive therapy when removing giant ovarian masses is also important. Postoperatively, reducing ileus, providing respiratory support, supporting abdominal wall tension, and monitoring hemodynamic parameters are key.[26] In our case, surgical staging of Total Abdominal Hysterectomy Salpingo Oophorectomy Sinistra, right salpingectomy and right partial oophorectomy, aspiration of ascitic fluid, left pelvic lymphadenectomy, and omentectomy were performed.

Recently, results from multicenter studies have shown that conservative therapy (preserving fertility) does not increase recurrence rates.[27] Fatal complications described in the literature include cardiac failure, pulmonary failure, pulmonary embolism, and sepsis.[28] In this case, bilateral oophorectomy was not performed as the patient was not willing to have both ovaries removed. Initially, the patient was afraid to seek treatment. The patient should not have been afraid so that the course of the disease did not worsen and the size of the tumor was not as large as that encountered in the case.

CONCLUSION AND SUGGESTIONS

Anatomical pathology investigation and transabdominal ultrasound showed the presence of a huge borderline mucinous cystadenoma measuring approximately 27 cm in a 38-year-old lady. TAH left salpingo-oophorectomy, right salpingectomy, partial right oophorectomy, lymphadenectomy, and omentectomy were among the surgical staging procedures carried out. The patient refused to have a bilateral oophorectomy. This case emphasizes the importance of finding large ovarian tumors early and taking appropriate measures to avoid problems. A mucinous cystadenoma can grow to a very large diameter and may have borderline changes despite the fact that it is usually benign. Poorer outcomes and more complicated surgery may result from patient procrastination caused by fear or ignorance. To improve prognosis and reduce the burden of surgery, it is imperative to inform women about early symptoms and encourage prompt medical consultation.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this article.

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