Ovarian Malignant Goiter in A Young Woman: A Case Report

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Abstract: Malignant goiter has no obvious clinical manifestations in the initial stage, so it is difficult to diagnose by imaging examination, and the postoperative pathological results are particularly important. This paper reports the diagnosis and treatment of a patient with malignant ovarian goiter. On June 30, 2021, the patient was hospitalized for more than 18 months because of the discovery of the right accessory mass. After completing the relevant examinations, the patient underwent exploratory laparotomy. During the operation, the pelvic abdominal cavity uterus adhered to the right accessory. The right ovary showed cystic enlargement of about 6×5cm, laparoscopic total uterus + right adnexectomy + omentum resection + pelvic and abdominal multiple nodule resection. The postoperative pathological return was consistent with malignant ovarian goiter. After 4 months of follow-up, the vaginal end of the patient healed well, tumor markers and other indicators were normal, and no obvious abnormalities were found in gynecological and thyroid color Doppler ultrasound. The diagnosis and treatment process of this case suggests that the clinical symptoms of ovarian goiter are lack of specificity and easy to be misdiagnosed. Clinicians should improve the understanding of this disease, enhance the awareness of early screening, and improve the level of diagnosis and treatment.

Keywords: Malignant ovarian goiter, Thyroid cancer, Ovarian carcinoma, Case report.

1. Introduction

Ovarian goiter (so) is a special type of ovarian highly differentiated single germ teratoma. Who defines it as a mature teratoma composed of all thyroid tissues or more than 50% of tissues. It accounts for 0.3%-1.0% of all ovarian tumors and 1%-3% of all ovarian teratomas[1-2]. Most ovarian goiters are benign tumors, while malignant ovarian goiters account for only 5%-10%. Malignantstrumaovari (MSO) refers to ovarian goiter that meets the diagnostic criteria of malignant thyroid tumor or has the performance of distant invasion and metastasis[3]. It usually occurs in women over 40 years old and is common in perimenopause. Relevant reports at home and abroad is less. At present, less than 300 cases have been reported[4]. The prognosis is good, but the mortality is higher than that of thyroid cancer[5]. This case is a 28 year old young woman with malignant ovarian goiter, which is reported as follows.

2. Case Data

2.1 History and Physical Examination

female, 28 years old. Due to the discovery of the right accessory package for more than 18 months, it was received by our hospital on June 30, 2021. The patient is unmarried, has a history of sexual life, has zero pregnancy and zero childbirth, has previous menstrual regularity, with a cycle of 28 days and a menstrual period of 6 days, moderate menstrual volume, bright red color, with a small amount of blood clots, dysmenorrhea (-), and the last menstruation: June 20, 2021. The patient's physical examination in December 2019 found a cyst in the right adnexal area, about 2cm in size × 2cm (no single one was found), and the gynecological B-ultrasound cyst was regularly rechecked every three months without obvious enlargement. On June 17, 2021, gynecological B-ultrasound examination was performed: two sizes of about 41mm were visible in the right ovary × 38mm, 27mm × 24mm cystic dark area. Multiple partitions can be seen in the dark area, except for cystadenoma. In addition, the left lower abdomen is close to the peritoneum, and four, about 27mm, can be seen in the abdominal cavity × 23mm slightly hyperechoic mass with clear boundary. Considering the mesenteric or omental origin of parenchymal space occupying lesions, double kidney + lower abdomen CT examination showed that there was a cystic solid mass shadow in the left accessory area, with a maximum of 38mm×63mm, multiple nodules can be seen in the abdominal cavity and pelvic cavity. Considering the enlargement of lymph nodes, surgery is recommended. On June 28, 2021, the patient was treated in the Second Affiliated Hospital of Shaanxi University of traditional Chinese medicine. Transvaginal three-dimensional B-ultrasound showed a cystic mass of the right appendix, about 3.7cm in size × 4.0cm × 4.2cm, surgical treatment is recommended. Now, in order to seek systematic treatment, he is hospitalized in our hospital, and the outpatient department is admitted with "accessory package". On admission, the patient was clear and in good spirits, with no vaginal bleeding and abnormal discharge, no headache, dizziness, abdominal pain, abdominal distension, no palpitation, chest tightness, shortness of breath, no fever, chills, nausea, vomiting, acceptable food intake, night rest, normal stool and urine, and no significant change in recent weight. In 2012, the patient underwent left adnexectomy due to the torsion of the left ovarian teratoma pedicle, and his personal history is not special. Denied family history of genetic diseases and malignant tumors. Palpebral conjunctiva is slightly pale, auricle morphology is normal, hearing loss is serious, mouth and lip color is dark, thyroid gland is not touched and swollen, other vital signs are stable, heart and lung are not obviously abnormal, specialist physical examination: vulva: married unproductive; Vagina: smooth, smooth mucous membrane without congestion, moderate secretion, yellow color, no obvious odor; Cervix: smooth, normal shape, touching blood (-), lifting and swinging pain (-); Uterine body: posterior, often large, medium quality, regular surface, moderate mobility, no tenderness: attachment: the right attachment area can reach a size of 4cm × 3cm mass, no obvious tenderness,
no obvious abnormality in the left attachment, tenderness (-).

2.2 White Blood Cell Count in Laboratory and Auxiliary Examinations

White blood cell count: 10.64 ×10^9/l (reference range 3.50-9.50), lymphocyte percentage 6.6% (reference range 20.0-50.0), D-dimer 1.4mg/l, no obvious abnormalities in the seven items of thyroid function and tumor markers. Pelvic MR: cystic focus in the right adnexal area, considering serious cystadenoma and multiple solid nodules in the pelvic cavity. CT of chest and upper abdomen: subpleural nodules in the dorsal segment of the left upper lobe and the right lower lobe, calcification in the right upper lobe, and cysts in the left lobe of the liver. Enhanced CT of the lower abdomen: multiple highly enhanced nodules in the pelvis, liver crest and left lobe of the liver, considering the possibility of reproductive lesions, teratoma with ovarian goiter, pelvic and abdominal metastasis. Electronic colonoscopy: no abnormality is found in rectum and whole colon. Gastroduodenoscopy: 1) Barrett esophagus?; 2) Reflux esophagitis (Grade B); 3) Chronic superficial gastritis. B-ultrasound of abdominal incision scar: the subcutaneous soft tissue structure at the abdominal incision scar is neat, the layer is clear, and no clear abnormality is found.

3. Diagnosis and Treatment Process

After completing the relevant examinations after admission, according to the MDT multidisciplinary consultation opinions of our hospital, the clinical diagnosis: 1) right adnexal mass (nature to be checked), 2) pelvic and abdominal nodules (nature to be checked). Considering the height of the right accessory mass of the patient, we should consider the reproductive diseases, teratoma with ovarian goiter, multiple highly enhanced nodules in the pelvic cavity, liver crest and left lobe of the liver, and the possibility of abdominal and pelvic metastasis of teratoma with ovarian goiter: combined with the discussion of relevant doctors, according to the current condition of the patient, 1 It is recommended to perform laparoscopic exploration, keep the lavage fluid of the pelvic and abdominal cavity during the operation, peel off the ovarian space occupying lesions and solid space occupying nodules during the operation, and send them to rapid freezing, and determine the scope of the subsequent operation according to the freezing results. Laparoscopic exploration was performed after surgical contraindications were excluded. Intraoperative findings: a small amount of yellowish free liquid was seen in the pelvic cavity, and the uterus adhered to the right appendage. The right ovary showed cystic enlargement of about 6cm×5cm, gray white. Multiple round masses are found in the greater omentum, larger of which is 2cm×3cm, the greater omentum blood vessels run obviously, and another one with a size of about 1cm can be seen in the peritoneum of the right paracolic sulcus ×1cm round nodule, seen on the left peritoneal diaphragmatic surface near the heart - about 1cm in size × 1cm round nodules, all of which protruded to the abdominal cavity, underwent right ovarian tumor denudation + omental mass resection and biopsy. Take the lavage fluid from the basin and abdomen and send it to the doctor for examination. Send the pathological report of rapid freezing during operation: (right) oocarpic cystic teratoma with malignant goiter, tumor tissue was found in the greater omentum. It will be further determined after paraffin sections are fully taken. Combined with the patient’s situation, after explaining and communicating with the patient's family members, it was decided to perform laparoscopic hysterectomy + right adnexectomy + omentum resection + pelvic and abdominal multiple nodule resection. Pathological report of paraffin section after operation: under the microscope: (right ovary, greater omentum, diaphragm, abdominal wall) thyroid follicles of different sizes are seen. Glial like cells are found in some follicle cavities, and the follicle epithelium is flat. Glial like cells are missing in some follicle cavities, and the follicle epithelium is cubic. Pathological diagnosis: (right) goiter with malignant biological behavior of ovary: disseminated nodules of goiter with malignant biological behavior were found in omentum, left diaphragm and right abdominal wall; (right) corpus luteum of ovary; (right) fallopian tube tissue; Endometrial polyps; Secretory endometrium; Chronic cervicitis. Note: the malignant goiter of greater omentum, left diaphragm and right abdominal wall may be caused by the rupture and dissemination of ovarian capsule from the malignant goiter of ovarian biological behavior (right). Lavage fluid of pelvic and abdominal cavity: epithelial tumor cells were found. Diagnosis: ovarian malignant goiter (stage IIIC). After operation, the patient was given symptomatic treatment such as fluid infusion, potassium supplementation and anti-infection, and the patient recovered well. By the 8th day after operation, the patient was in stable condition and was discharged.

4. Discussion

malignant goiter of ovary often occurs in 40-50 years old, with an average age of 43 years[6] there are few specific symptoms of MSO, and the common symptoms are abdominal pain, irregular menstruation, pelvic mass[7]. Single occurrence is more common, and CA125 is mostly normal[8] which is basically consistent with this case. MSO tumors are mainly colloidal and solid, presenting as unilocular or multilocular cysts, most of which are brown in color, and most of the metastases are solid nodules, without brown, colloidal, thyroid like and other characteristic appearances[9]. This pathology is multilocular cystic, pale yellow dorsal gelatinous body, and the metastases are grayish red solid nodules, which is basically consistent with the description of MSO tumor.

At present, there is no clear diagnostic standard for MSO, and now most of them are thyroid cancer. The important standard for the diagnosis of thyroid cancer is envelope invasion. In ovarian tumors, because of the lack of envelope, the invasion of surrounding tissues, blood vessels and metastasis are the main basis for the diagnosis[10]. Shacoely et al.[9] found that large follicular structure and lack of fibrosis are common in malignant goiter with ovarian biological behavior. Trabecular structures in benign biological behavior are more common. Large follicular structures can be seen in the pathological tissue in this case, which is basically consistent with the final diagnosis of malignant goiter in ovarian biological behavior.

Imaging diagnosis of ovarian goiter is relatively limited. Its
ovarian differentiated thyroid cancer in the real world, using the uterus was not retained, while the 5-year survival rate of advanced patients is as low as 33%[15]. During the operation of this case, the right appendage was closely adhered to the uterus (see Figure 1). Considering that it may invade the serosa of the uterus and have multiple metastases, the uterus was not retained. A literature review of 57 cases of ovarian differentiated thyroid cancer in the real world, using different surgical methods and adjuvant treatment, followed up for 25 years, the recurrence rate was only 7.5%, and it was considered that only extraovarian spread and distant metastasis were necessary for radical pelvic surgery and total thyroidectomy[16]. This patient has only biological malignancy and no histological malignancy, and the scope of operation is large enough. Considering that the patient is still very young, thyroidectomy is not considered for the time being. If there are signs of recurrence and metastasis in the later stage, thyroidectomy can be considered. The patient had no significant increase in B-ultrasound after repeated reexamination, and recovered well after operation. According to the diagnosis of case report, stage III-IV of ovarian goiter cancer (carcinoid germ cell tumor) was considered. The biological nature of the tumor is low-grade malignancy, and the tumor has a wide range of invasion (considering liver metastasis), so BEP first-line chemotherapy is adopted. After the operation, BEP chemotherapy (bleomycin, cisplatin + etoposide) was used in the external hospital, and then BEP regimen (bleomycin, cisplatin + etoposide) was given after the biochemical indexes were corrected in our hospital due to bone marrow suppression. Because bleomycin vomiting was obvious after intramuscular injection, the family members refused bleomycin in the third course of treatment, so EP regimen (cisplatin + etoposide) was given. The fourth course of treatment (cisplatin + etoposide). Two months after the operation, Mr showed a small round long T1 and long T2 signal shadow in the left lateral lobe of the liver, with a diameter of about 1cm, which was basically consistent with the description of the preoperative CT report. No obvious abnormalities and recurrence were found in the tumor series and other imaging examinations after the operation. Goffredo et al.[17] believe that patients with malignant ovarian goiter have a high survival rate regardless of the treatment, but they have a high risk of thyroid cancer. The clinical imaging examination of thyroid should be strengthened in the later follow-up. Although the surgical methods and adjuvant treatment of patients with malignant goiter are different, long-term follow-up and testing are recommended for at least 10 years. The evaluation of the current treatment effect and the indicators of later follow-up.

Figure 1: adhesion between uterus and right ovary

MSO lacks clinical characteristics, and preoperative diagnosis is difficult. Cytological examination is more important in differential diagnosis, and there is no unified standard of treatment. At present, surgical treatment is the main treatment. For recurrence or metastasis in the middle and late stages of this case, thyroidectomy + iodine 131 treatment can be considered. Thyroid should be routinely examined in subsequent reexamination, and the observation and follow-up should be at least 10 years.
References


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