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Case Report

Giant broad ligament hysteromyoma with degenertion: report of one case

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Summary

Leiomyomas is one of the common diseases in women of child-bearing ages, which are usually originate from the uterus. The incidence of broad ligament hysteromyoma is < 1%, and the giant broad ligament hysteromyoma is rare in clinic. The diagnosis is often confused with ovarian tumors and retroperitoneal tumors due to the degeneration. The patient had a special history of rectal cancer, which made it more difficult to diagnosis. Surgery was considerable difficult due to the large size. The authors also found the external iliac vein formed vascular diverticulum due to compression, which is uncommon to see in the clinic.

Key words: Case report; Giant broad ligament hysteromyoma; Diagnosis; Degeneration; Laparotomy.

Introduction

Myoma of uterus is a common gynecologic disease in women of childbearing age. Broad ligament myoma is a special type of myoma of uterus, the incidence of which is less than 1% [1]. Large ligamentous leiomyoma with a diameter greater than 20 cm is rare in clinic. The clinical manifestations are atypical and giant broad ligament hysteromyoma is often accompanied by degeneration, posing the diagnostic dilemma in clinical and radiological difficulty in differentiating with an ovarian tumour and retroperitoneal tumor. Broad ligament hysteromyoma is often rich in blood supply and may lead to the dislocation of some anatomical structure, bringing difficulties to the operation. This case is being presented not only because of the rare incidence, but also due to its diagnostic dilemma and difficulties in surgery.

Case Report

A perimenopause woman aged 52 was admitted to the hospital for discovering mass in abdominal for a month. She was referred to the outpatient department of gastroenterological surgery one month before admission, with the complain of intermittent anal bleeding for three months. After receiving abdomen plain and enhanced CT scan examination, the results showed a pelvic mass, about 23×20×10cm, considering of cystadenoma in the right adnexal region. Through colonoscopy and pathological biopsy examination, the patient was diagnosed with rectal villous tubular adenocarcinoma and received transrectal lesion excision and radioactive particle implantation surgery thereafter. She was re-hospitalized again after the improvement of the general condition. Throughout the course, she was regularly menstruating and had no nausea, emesia, abdominal pain, abdominal distention, limb pain or urinary related complains.

She had no other medical history of note. Menstrual history and obstetric history: menarche at 13 years, menstruation lasted 4-5 days, the cycle was 28-29 days, and LMP: 2017-10-10. There was no dysmenorrhea. The volume and colour of menstruation was normal. G2P2, given birth to a son and a daughter. She used to work for tableware disinfection, and had a history of contacting disinfectant water for nine years.

Abdominal examination: no swelling of the abdomen. A hard mass could be palpable extending from pelvis up to xiphisternum. The inner side exceeded the linea alba and laterally extended into the flanks. The boundary was basically clear. The activity was poor, and without tenderness. Gynecological examination: the vulva was married type and the vagina was unobstructed. The cervix was smooth and had no swinging pain.The right side of the posterior fornix was full. The mass could be palpable in the right adnexal area, The mass squeezed the uterine body to the left. No abnormality was found in the left adnexal area.

Auxiliary examination: no abnormalities were found in blood routine, urine routine, stool routine, electrolyte, liver and kidney function and coagulation, electrocardiogram, and chest radiography. Tumor markers CA125, CA724, CA199, CEA, HE4, and AFP were all within normal range. HPV: negative, TCT: negative for intraepithelial lesion or malignancy (NILM). Transvaginal color Doppler ultrasound showed a pelvic solid mass,considering retroperitoneal tumor or adnexal tumor. Whole abdominal CT enhancement indicated a large occupancy in right middle, lower abdomen, and pelvis. Considering benign or borderline tumor lesion, which may source from right adnexal or broad ligament, and metastases could not be excluded. Clinical suggestion for further examination is to consider a combination (Figure 1).

Intraoperative conditions: the authors performed laparotomy under general anesthesia. On opening the peritoneum, they found the entire tumor located on the right side of the abdomen, arising from the pelvis. The upper bound of the tumor reached the xiphoid

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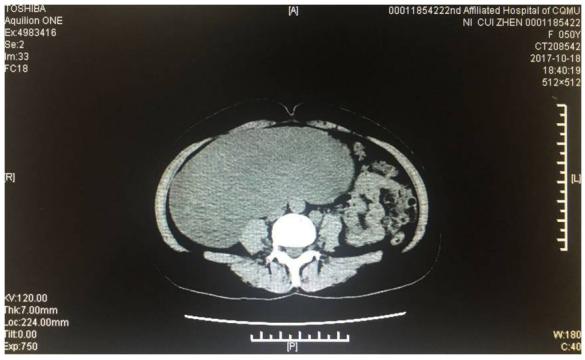

Figure 1. — Abdominal CT enhancement of the giant occupancy.

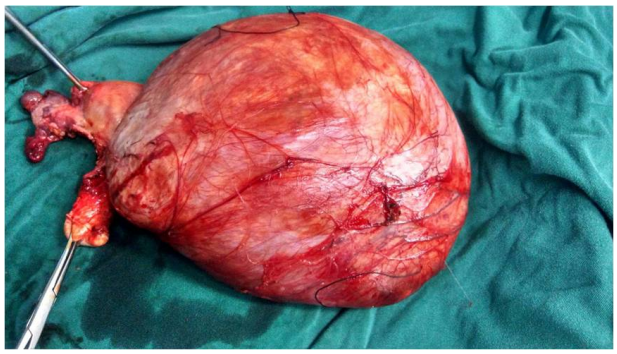

Figure 2. — Specimens: right adnexal area tumor, whole uterus, and bilateral adnexa. The size of tumor was about 20×20×10 cm, and the total weight was 2.8 kg.

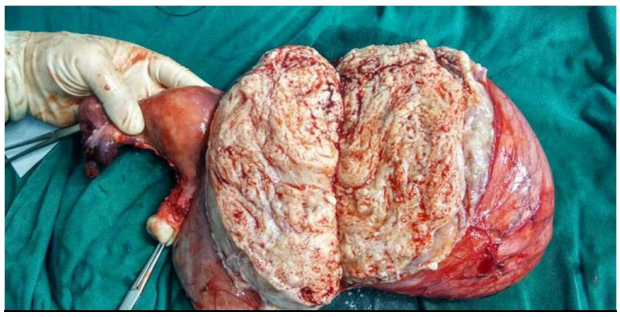

Figure 3. — The cut surface is grey-white with whorled appearance, with clear liquid flowing out.

process, which partially adhered to the omentum.The inner margin exceeded the ventral midline, the lateral boundary reached axillary midline. The size was about 23×20×10 cm, and several gross draining veins could be seen on the surface of the tumor. The right ovary and the parachute of the fallopian tube were closely attached to the tumor, and the suspensory ligament of ovary was overlapped on the mass. The uterus was normal in appearance and size, being pushed to the left by the mass. There was no obvious abnormality in the left fallopian tube and ovary, and some of the mesentery adhered to the left adnexa. After careful identification of the anatomical structure, the tumor was considered to originate from the broad ligament. Careful separation of pelvic mass and omental adhesions was performed. The right suspensory ligament of ovary was double-clamped and an ultrasonic scalpel coagulated was used and cut it off. Using 0 silk thread to double-suture the stump, a 2-0 silk thread ligature was used reinforcement. The peritoneum was opened over the tumor adhesion between the tumor surface and the surrounding tissues was bluntly and sharply separated. The tumor was encroaching into retro-peritoneal space, and just compressed on the right ureter and external iliac vein. The ureter was slightly dilated and the vascular wall of the external iliac vein was swelling and thinning. The authors invited a vascular surgeon for a consultation during the operation. Considering there was no vascular thrombosis, no other treatment was necessary. According to the negotiations with the patient and their family members before operation, hysterectomy and bilateral salpingo-oophorectomy was performed. The specimen is shown in Figure 2 and 3. Intraoperative frozen biopsy indicated leiomyoma of the right broad ligament with myxomatous degeneration. Postoperative pathological biopsy demonstrated leiomyoma of the right broad ligament with mucous degeneration and hyaline change.

Discussion

In this case, the authors present a 52-year-old woman diagnosed with giant broad ligament hysteromyoma beyond 20 cm. She had no specific clinical manifestation in the course of the disease, which was not easy to be found. Since the broad ligament communicates with the upper peritoneum, fibroids tend to grow into the retroperitoneal space, hence the patient could have no obvious abdominal swelling and clinical manifestation. If the broad ligament myoma keeps increasing, patients could form a wide range of compression symptoms such as abdominal pain, abdominal distension, lumbar acid, frequent urination, constipation, and sciatica [2, 3]. During the operation, the authors found that the ligamentous leiomyoma compressed on the right external iliac vein, making the vascular wall swelling and thinning. If this process continues, May-Thurner syndrome (or iliocaval compression syndrome may occur, resulting in decreased flow in the vein, vascular malformation, leg edema, pain, iliofemoral DVT, and post-thrombotic syndrome [4]. Therefore, patients with giant broad ligament myomas may have no specific clinical manifestations, to which clinicians should pay special attention.

Usually uterine leiomyoma does not present a sonological diagnostic challenge. However, when fibroids undergo degeneration, they may present clinical and sonologic diagnostic difficulties [5]. Enhanced CT can further demonstrate the internal structure of the degeneration myoma. However, due to the particularity of the location of the broad ligament myoma, the diagnosis is often confused with ovarian tumor, retroperitoneal tumor, and intestinal tumor. The large broad ligament myoma often complicates with degeneration due to its large volume, which leads to the relative lack of blood supply inner the leiomyoma. The commonly seen degeneration types include hyaline degen-

eration (63%), myxomatous degeneration (13%), calcified degeneration (8%), mucoid degeneration (6%), cystic degeneration (4%), red degeneration (3%), and fatty degeneration (3%) [6], which bring some difficulty in imaging diagnosis. In this case, according to the results of ultrasound and enhanced CT, the tumor was considered from the right adnexal area or giant broad ligament, and the nature of the tumor remained unknown. Combined with the history of rectal adenocarcinoma, the possibility of metastatic tumor cannot be excluded. When the imaging examination is not easy to judge, especially when the tumor is large, laparotomy should be considered.

During the operation, the abdominal incision should be abundant, as much as possible to expose the visual field of the operation to discover the boundary of the tumor and the relationship between the tumor and surrounding tissues. Since the giant ligament myoma often compress ureter or cause ureteral displacement, careful recognition the anatomical structure during the process of dissection is of great importance. In addition, it is necessary to perform operations under direct vision as much as possible to avoid the injury of important organs such as ureter. If it is difficult to identify the ureter, placing the ureteral stent may diminish injury through negligence [7]. The reduction of intraoperative bleeding is another key point in the operation. It is possible to first try to block the blood supply of the broad ligament myoma and further peel off the myoma. If resection of the uterus during surgery is performed and the operation space is fully extended, the surgery could be started from the normal side of the uterine. After reducing the blood supply of the uterus and broad ligament fibroids, it might be easier to further deal with the broad ligament myoma. Before closing the abdomen, the drainage tube can be placed in the retroperitoneal space to avoid blood accumulation and infection postoperation.

Multiple trials have shown it to be a reliable prophylactic method to decrease venous thromboembolism in postoperative patients [8]. Considering the deformation of the right external iliac vein, hypodermic injection of low molecular heparin (4000 iu qd) was given to prevent deep venous thrombosis 24 hours after the operation. Intermittent pneumatic compression devices were used throughout the hospital stay when the patient was immobile. The patient had a good recovery and was discharged eight days after operation.

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