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Degenerated Subserosal Uterine Leiomyoma Mimicking Carcinoma Ovary

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ABSTRACT

Uterine leiomyomas are the most common entities encountered in routine gynaecological practice. They are usually easily identifiable on routine imaging. However, there is increasing difficulty with diagnosing leiomyoma following hyaline degeneration as it might mimic ovarian pathology. A stepwise and a multidisciplinary approach in management of these cases is preferred to achieve optimal results.

We report a case of 40-year-old female presented to outpatient department with radiological diagnosis of complex adnexal mass and Ca-125 value 122 U/ml. Physical examination and radiological investigations suggested giant abdominopelvic mass, probably aggressive uterine or ovarian tumor preoperatively. Postoperative findings revealed hyaline degeneration of fibroid arising from anterior wall of uterus.

Keywords: Degeneration; ovarian tumor; uterine leiomyoma.

INTRODUCTION

Leiomyoma of the uterus is the most common benign tumor arising from uterine smooth muscle.[1] Such tumors occur in nearly half of women over the age of 35 years, with increased prevalence during the reproductive phase due to hormone-stimulated growth.[2] At 50 years of age, 80% of African and almost 70% of Caucasian women have leiomyomas.[3] Leiomyoma can be submucosal, intramural and subserosal depending on their location. As the underlying pathogenesis of the development of the leiomyoma remains unclear, several risk factors such as positive family history, genetic alterations, ethnicity, lifestyle factors (weight, smoking, diet, and exercise) have been identified.[4]

Leiomyoma can undergo different types of degeneration like hyaline, calcific, cystic, myxoid, red, fatty and rarely sarcomatous change. Degenerative changes of subserosal leiomyomas present particular difficulty in diagnosis due to its resemblance to unknown ovarian pathology. This can affect treatment and may frequently lead to unnecessary, more invasive exploratory laparotomy. Here we report a unique case of subserosal leiomyoma with degenerative changes which posed a diagnostic dilemma.

CASE REPORT

A 40 - year old female presented to gynaecology outpatient department (OPD) with complains of abdominal distension and occasional pain for two to three months. Abdominal distension was acute on onset, and it increased rapidly over short period of time. Her menstrual cycles were irregular as she used injection depot medroxyprogesterone acetate for contraception since last three years. There was no significant medical history. She had no major illness or any previous surgical procedures. Her family history was not significant.

In our OPD, a preliminary physical examination was performed which indicated good general condition with no evidence of pallor, edema nor any lymphadenopathy. On abdominal examination, a mass corresponding to the 24 weeks gravid uterus size was noted which was cystic in consistency with smooth surface, regular margin, mobile from side to side and non-tender. However, the lower pole of the mass could not be reached. Per speculum examination revealed normal uterine cervix and vaginal walls. On bimanual examination, above findings were confirmed. All the fornices were full of mass. Uterus could not be palpated separately from the mass.

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Abdominal ultrasonography showed a large space occupying lesion (17.2*17.5*16.5 cm) with few cystic spaces at midline of abdominopelvic cavity. Uterus was normal in size with normal endometrial echo complex. Left ovary was visualized, but right ovary could not be visualized. An ovarian pathology was suspected and advised for contrast-enhanced computed tomography (CECT) of abdomen and pelvis which revealed large, intraperitoneal complex cystic mass (21.1*15*23.6 cm) with internal enhancing, thick septa and mural nodules within the mass in abdominopelvic cavity originated most likely from right adnexa with a high suspicion of malignancy. Left ovary was raised and compressed by mass. However, right ovary could not be appreciated. Lymph nodes were not enlarged and no ascitic fluid was present. Her serum CA-125, CEA and LDH levels were 122.6 U/ml, 1.93 ng/ml and 201 U/ml respectively.

Considering the size of mass and suspicion of ovarian or uterine malignancy, she underwent staging laparotomy. There was no ascites present. Peritoneal fluid sampling was taken after washing with normal saline. On exploration, a soft boggy mass around 20*20 cm in size arising from anterior wall of uterus was noted. The mass was regular in margin and removed with intact membrane. Left ovary was cystic and right ovary was normal. Bilateral fallopian tubes were normal. Lymph nodes were not palpable. There were no deposits on pelvis, abdominal cavity and omentum. Total abdominal hysterectomy with left salpingo-ophorectomy, right salpingectomy and infracolic omentectomy were performed. The cut section of mass showed multiple cystic spaces with gelatinous fluid. Considering her age and benign look of the mass, her right ovary was preserved.

Figure 1.CECT of abdomen and pelvis showing degenerated myoma.

Histopathological examination revealed features of benign leiomyoma with areas of myxoid and hyaline degeneration. Omentum and peritoneal fluid sampling were negative for malignancy. Her postoperative period was uneventful. She was discharged on the 8th day of surgery and there were no fresh complains at 2 month follow up.

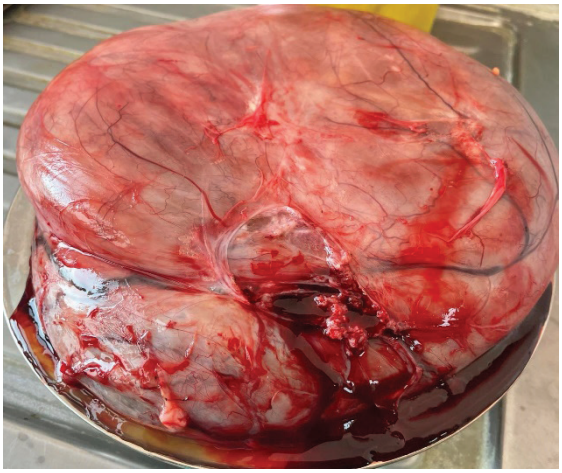

Figure 2. massive degenerative fibroid.

DISCUSSION

Leiomyomas are benign, monoclonal tumors of smooth muscle cells of the myometrium. They are commonly found in the reproductive age group women. Their size may vary but giant tumors weighing more than 25 lb. (11.3 kg or more) are rare.[5] As leiomyomas enlarge, they can outgrow their blood supply, resulting in various types of degeneration, such as hyaline, cystic, myxoid or red degeneration and dystrophic calcification.[6] The most common type of degeneration is hyaline and occurs in up to 60% of cases.

Leiomyomas may be asymptomatic, but large tumors often produce abnormal bleeding, pelvic discomfort (pressure or pain), dysmenorrhea, infertility, frequent urination, constipation, Pseudo-Meigs syndrome or preterm labour. Patient with subserosal fibroid is usually asymptomatic. They are detected incidentally or when they undergo degenerative changes with rapid growth in size, or with abdominal distension as in our case.

The preferred imaging modality for initial evaluation is ultrasonography as it is least invasive, cost effective, highly sensitive and easily available. Leiomyomas appear as focal masses with a heterogeneous texture and it

may vary from hypo- to hyper echoic depending on the ratio of smooth muscle to connective tissue. However, hyaline degeneration of fibroid can have variegated appearance and it appear similar to complex adnexal mass or ovarian cyst. CT scan or MRI can be helpful in diagnosis. Even sometimes they may fail to detect the nature of lesion and their origin as in our case. In our case, CECT also couldn't visualize the right ovary that led us to the assumption of mass originating from ovary. Radiological features also suggested malignant ovarian cyst; A diagnostic dilemma.

Anyanwu et al. reported two cases of hyaline cystic degeneration of fibroid in pregnant and non-pregnant woman mimicking Ca ovary.[7] Similar cases were reported by Sotomayor et al.[8] in which subserosal pedunculated leiomyoma with hyaline degeneration was reported and another case reported by Ranjanna et al. in which large broad ligament fibroid with cystic degeneration were misinterpreted as malignant ovarian tumor.[9]

This case is presented here because it is rare and sometimes clinical and radiological preoperative diagnosis may get it wrong. This may mislead to the overtreatment of patient. So, one should always think of fibroid as a differential diagnosis in a patient presenting with large abdominopelvic mass.

CONCLUSIONS

Large myomas with extensive degeneration may mimic ovarian neoplasm on radiological imaging and can impose a challenge in diagnosis. Degeneration of a fibroid should be considered as a differential diagnosis prior to surgical interventions for such type of huge pelvic masses. These cases should be examined thoroughly both macroscopically and microscopically to provide appropriate management and achieve optimal results.

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