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Large (7.2 kg) Subserosal Fibroid with Monkenberg's Calcification in a Postmenopausal Woman: Extremely Rare Case with Review of Literature

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Abstract

We Report an unusual case of very large uterine subserosal leiomyoma mimicking ovarian mass on diagnostic modalities. A 70 year old postmenopausal woman presented with gradual distension of abdomen and diffuse pain in abdomen since 2 months. Ultrasonography was suggestive of large extrauterine mass of 20 cm × 15 cm × 18 cm displacing uterus anteriorly not separately visualised from either ovaries neoplastic origin likely ovary. While on Computed tomography scan was suggestive of 21 cm × 16cm × 19 cm mass of benign etiology possibility of subserosal fibroid with Histopathology correlation. Exploratory laparotomy with removal of huge subserosal fibroid with total abdominal hysterectomy with bilateral Salpingoophrectomy is the surgery done in our case. The majority of uterine leiomyomas are confidently diagnosed sonographically. However, large, degenerated tumours like in our case may be a diagnostic challenge and postmenopausal uterine leiomyoma with degeneration and Mockenberg's calcification in a postmenopausal woman is rare and Computed Tomography may help further characterize large pelvic masses and determine their organ of origin. As in our case its diagnosed in computed tomography.

Keywords: Computed tomography; Ovarian mass; Uterine subserosal leiomyoma; Ultrasonography; Subserosal fibroid; Salpingoophrectomy; Hysterectomy

Introduction

Leiomyomas or fibroids arise from overgrowth of the smooth muscle and connective tissue of the uterus, and most commonly involve the uterine corpus, although they may also occur in the cervix in a minority of instances. Typical fibroids are easily recognized on imaging. However, an atypical presentation caused by degenerative changes can cause diagnostic confusion as in our case mimicking ovarian tumour [1,2]. The use of color Doppler ultrasonography (CDUS) to visualize interface vessels between the uterus and a juxta-

uterine mass is useful in the differential diagnosis. Also, magnetic resonance imaging (MRI) yielding multiplanar views can reveal the peduncle, or confirm the presence of a normal uninvolved ovary [3]. In this case report, we present multimodal abdominopelvic radiologic imaging findings of a patient with a huge giant subserosal uterine leiomyoma, in conjunction with histopathological findings.

Case Report

A 70 Year old postmenopausal woman presented to our hospital with a complaints of gradual distension of abdomen since 2 months and diffuse pain in abdomen since 3-4 months. All routine laboratory test values were within normal limits. On general examination patient was vitally stable. Per abdominal examination revealed large abdominal mass corresponding to 28 to 30 weeks Gestational size of uterus arising from pelvis, smooth surface, firm to hard in consistency, mobility slightly restricted. Its lower border could not be felt. Per speculum examination revealed cervical os was taken up. On per vaginal examination a mass of 28-30 weeks gestational size was palpable which was firm to hard in consistency, uterus could not be felt separately from the mass, bilateral fornices were free and there was no tenderness. Abdominal ultrasound examination showed a large heterogenous hypoechoic mass of size 20 cm × 15 cm × 18 cm in the pelvico abdominal region displacing the uterus anteriorly and is not separately visualised from either ovary query neoplastic origin likely ovary. Contrast-enhanced computed tomography of the abdomen and pelvis demonstrated a large well defined lobulated soft tissue attenuating minimally and heterogeneously enhancing solid mass lesion of 21 cm × 16 cm × 19 cm with multiple foci of calcification seen within the pelvis. Computed tomography findings suggestive of benign etiology query subserosal fibroid. Laboratory tests including tumour markers CA-125 and CEA were within normal limits. Patient underwent exploratory laparotomy with Total Abdominal Hysterectomy with bilateral Salpingoophrectomy with removal of huge subserosal Fibroid. Laparotomy revealed a Huge mass of 28 cm × 18 cm × 20 cm arising from anterior serosal part of uterus and the part of peritoneum near the urinary bladder, the mass was highly vascular and adherent to bladder and large bowel (**Figure 1**).

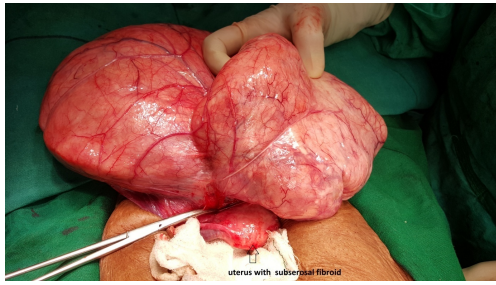


Figure 1 Intra op picture of uterus with subserosal fibroid

A succenturiate mass of 15 cm × 10 cm × 10 cm was seen arising from the previous mass. Both mass were soft to firm in consistency. Bilateral ovaries were atrophic and the uterus and cervix was of normal size. Mass was firmly adherent to bowel and urinary bladder and had to be separated by sharp dissection. Abdominal hysterectomy with bilateral salpingoopherectomy was performed. On gross inspection the removed bilobed subserosal mass weighs 7.2 kg with atrophic uterus was seen (**Figure 2**). On histopathological examination revealed uterus was atrophic and myometrim showed thick walled blood vessel with Monckeberg's calcification with subserosal leiomyomas. Sections through the mass revealed a tumor arranged in interlacing fascicles and bundles with ient areas of calcifications and degeneration. No significant atypia was evident (**Figure 3**). Final impression suggestive of subserosal fibroid. The Patient's post-operative course was uneventful.

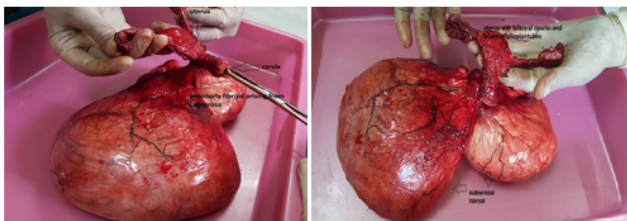


Figure 2 A) Gross specimen of subserosal fibroid with uterus, B) Gross specimen of uterus with subserosal fibroid

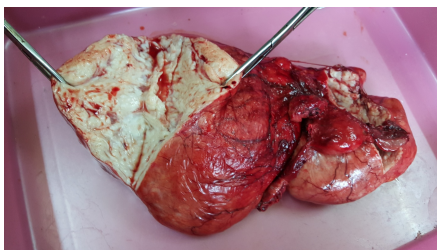


Figure 3 Cut section of subserosal fibroid

Discussion

Leiomyomas arise from overgrowth of the smooth muscle and connective tissue of the uterus. Around the menopause, leiomyomas decrease in size because their growth is thought to be estrogen dependent, but leiomyomas may still be newly diagnosed in postmenopausal women. A calcified pedunculated leiomyoma in a postmenopausal woman is extremely rare; in such cases it is more difficult to predict the clinical symptoms and physical findings. In our case there was discrepancy between ultrasonography and computed tomography findings. Typical fibroids are easily recognized on imaging, but atypical presentation caused by degenerative changes can cause diagnostic confusion in postmenopausal women [2]. As leiomyomas enlarge, they may outgrow their blood supply, resulting in various types of degeneration: hyaline, myxomatous, calcific, cystic or red degeneration. As in our case it showed huge fibroid with calcific degeneration. In general, hyaline degeneration is the most common (63%) form of degeneration, while the others occur less frequently, such as myxomatous changes (13%), calcification (8%), mucoid changes (6%), cystic degeneration (4%), red degeneration (3%), and fatty changes (3%) [3]. The finding of a calcified leiomyoma is more common in postmenopausal woman. Over time, the blood supply within the myoma might decrease, and the tissue becomes ischemic. Calcium is deposited in the peripheral portion of the leiomyoma. As the degenerative changes progress, the leiomyoma may become calcified. Pedunculated leiomyomas can have obscure origins and may be mistaken for a lesion of ovarian origin. A sonographic diagnosis of a pedunculated, subserosal leiomyoma can be made if a vascular pedicle is demonstrated. On Ultrasonography fibroids appear as well-defined, solid masses with a whorled appearance. These are usually of similar echogenicity to the myometrium, but sometimes may be hypoechoic. However, these features may not always be detected sonographically [4-6]. Computed tomography is not the primary modality for diagnosing leiomyomas. CT scan is not the investigation of choice for the characterization of pelvic masses. Uterine fibroids are often seen incidentally on CT scans performed for other reasons. The typical finding is a bulky, irregular uterus or a mass in continuity with the uterus. Degenerate fibroids may appear complex and contain areas of fluid attenuation [7,8]. MRI is the most accurate diagnostic test to assess the precise sizes of the fibroids and the position of each fibroid within the uterine wall (submucous, intramural, subserous).

Conclusion

In the literature, calcified pedunculated subserous leiomyoma in a postmenopausal woman is rare. Pedunculated leiomyomas with calcified degeneration should be considered in the differential diagnosis of a solid and calcified adnexal mass. Our case is one of the rarest presentation of huge subserosal fibroid with calcific degeneration which was mimicking an ovarian mass in postmenopausal female.

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