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Primary ovarian leiomyoma - An uncommon entity: Case report

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Abstract

Ovarian leiomyoma is one rare entity among ovarian smooth muscle tumors which account for 0.5-1% of all ovarian tumors. It occurs mainly in premenopausal age group as unilateral, small, benign, solid tumor. Here we present a case in a 45 years old patient presenting with mass abdomen and abdominal pain. Computer tomography revealed a right adnexal solid mass arising from ovaries. Laparotomy was done and specimen subjected to frozen section and found to have appearance of leiomyoma arising from ovaries, further subjected to histopathology and immunohistochemical staining with α -smooth muscle actin, inhibin and desmin and concluded it to be primary ovarian leiomyoma.

Keywords: Ovarian leiomyoma, permenopausal, α -smooth muscle actin, benign sex stromal tumor, computed tomography

Introduction

Ovarian fibroids which accounts for about 0.5 -1% of benign ovarian tumors are mainly seen in premenopausal age group women [1, 2]. It is usually a small, unilateral, benign, asymptomatic tumor discovered incidentally on pelvic examination and computer tomography and later confirmed by histopathology and immunohistochemical staining [3]. The possible origin of these tumors are from ovarian hilar blood vessels, ovarian ligament, metaplasia of cortical smooth muscles, undifferentiated germ cells or ovarian stromal smooth muscle cell [4]. We hereby present a case of a permenopausal women with right ovarian leiomyoma managed with laparotomy, tumor resection followed with total hysterectomy and bilateral salpingoophorectomy.

Case report

A 45years female patient presented in our OPD with mass per abdomen and lower abdominal pain since 20days. Her menstrual pattern was normal. On examination a mass of around 20weeks size was found to be arising from pelvis. The mass was non tender, with smooth surface, firm in consistency, freely mobile, and all borders were well demarcated except the inferior border. On per vaginal examination right forniceal fullness was noted. Bimanual examination the mobility of the mass was independent of that of the uterus. Ultrasonography suggested it to be a right adnexal mass of 18×9.5 cm solid well circumscribed mass likely to be arising from ovaries. CA-125, CEA and AFP were within normal limits. Laparotomy was done and a solid well circumscribed mass of 18×10cm [figure 1 & 3] was resected and subjected to frozen section, which showed whorly arranged spindle cell fasciculi with minimal mitotic activity with no necrosis or degeneration. Ovarian tissue was identified at the periphery of the tumor [Figure 2]. The laparotomy was followed by total abdominal hysterectomy and bilateral salpingoophorectomy. Later histopathological examination revealed bundles of interlacing spindle cells with minimal mitotic activity arising primarily from ovaries [figure 4] and with immunohistochemical staining showed a strong reaction to α -smooth muscle actin and desmin. With above evidence the tumor was concluded to be Primary ovarian leiomyoma. Suture removal was done on 10TH day and discharged on 12TH day with satisfactory condition.

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Fig 1: gross appearance of tumor.



Fig 2: Tumor along with right ovary indicated by arrow.



Fig 3: Cut section of the tumor along with right ovary (gross specimen) with whorls of greyish white tissue with no necrosis or degeneration.

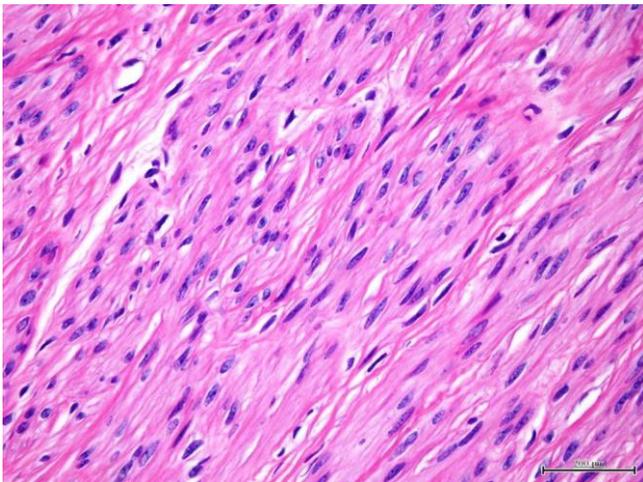


Fig 4: Microscopic view of spindle smooth muscle cells with minimal mitotic activity.

Discussion

A primary ovarian tumor is a very rare tumor, with about 80% occurring in premenopausal patients.² Most ovarian leiomyoma are usually unilateral, small tumors of <3cm in size [5]. In young age group patients it may be present bilaterally. The tumors are usually asymptomatic, but giant ovarian leiomyoma may present with ascites, hydrothorax, hydronephrosis, or elevated tumor marker levels such as CA-125 [6].

Ovarian leiomyoma often co exists with uterine leiomyoma thus is be distinguished from broad ligament tumors extending into hilum of ovary or wandering fibroids [5]. The presence of compressed ovarian tissue in periphery of the tumor points its origin being from ovaries. Due to its rarity of occurrence the diagnosis is often missed on ultrasonography and CT pelvis.

The histological origin of ovarian fibroids still being uncertain, is hypothesised to take its origin from ovarian hilar blood vessels, ovarian ligament, metaplasia of cortical smooth muscles, undifferentiated germ cells or ovarian stromal smooth muscle cell [4]. The condition being predominantly associated with nulliparous patients, its exacerbation during pregnancy, its positivity for oestrogen/progesterone receptors and that estrogen plays a prominent role in exacerbation of the condition suggests that its pathogenesis is similar to that of uterine leiomyoma [7]. Tomas *et al.* have suggested ovarian fibroid could arise from smooth muscle metaplasia of endometriotic stroma or myofibroblast of ovarian stromal cells [10].

The differential diagnosis of this rare entity are Fibroma – most common ovarian neoplasia with microscopic spindle cell appearance. Sex cord stromal tumors such as Thecoma, Sertoli-Leydig cell tumors, Granulosa cell tumors, Sclerosing stromal tumors and Signet ring stromal tumors all showing spindle cell microscopically [8]. Immunohistochemically leiomyoma shows a strong positivity with α -smooth muscle actin and diffuse positivity with desmin, thus differentiating itself from other spindle cell tumors of ovary. Leiomyoma also stains with Masson’s trichrome and h-caldesmon [9]. Fibromatous tumors though stain positively with α -smooth muscle actin stain negatively or with focal positivity with desmin, thus helping in its differentiation from ovarian fibroids [7].

In case of huge tumors malignancy should be ruled out despite its benign appearance on microscopically, and stressed upon the presence of cellular atypia and necrosis. And possible Spindle cell carcinoma and metastatic gastrointestinal stromal tumors are to be ruled out [10].

Surgical approach for ovarian fibroid in premenopausal age is salpingoophorectomy with or without hysterectomy. However in young patients ovarian preservation can be considered. In our case as the patient total abdominal hysterectomy and bilateral salpingoophorectomy was performed and the patient is satisfactory after surgery. Wei *et al.* reported a case in which ovary preservation was possible in a case of pedunculated ovarian leiomyoma [12].

The prognosis of this tumor is excellent without recurrence, thus

fertility preserving surgeries are attempted with much success [11].

Conclusion

Ovarian leiomyoma being a rare entity of ovarian spindle cell tumors should be considered in differential diagnosis of such tumors. And accurate diagnosis can be arrived with immunohistochemical staining with α -smooth muscle actin, inhibin and desmin.

References

1. Van Esch EM, van Wijngaarden SE, Schaafsma HE, Smeets MJ, Rhemrev JP. The diagnostic and therapeutic approach of a primary bilateral leiomyoma of the ovaries: a case report and a literature review. *Arch Gynecol Obstet.* 2011; 283:1369-71.
2. Blue NR, Felix JC, Jaque J. Primary ovarian leiomyoma in a premenarchal adolescent: first reported case. *J Pediatr Adolesc Gynecol. J Pediatr Adolesc.* 2014; 27(4):87-8.
3. Wei C, Lilic N, Shorter N, Garrow E. Primary ovarian leiomyoma: a rare cause of ovarian tumor in adolescence. *J Pediatr Adolesc Gynecol.* 2008; 21(1):33-6.
4. Doss BJ, Wanek SM, Jacques SM, Qureshi F, Ramirez NC, Lawrence WD *et al.* Ovarian smooth muscle metaplasia: an uncommon and possibly underrecognised entity. *Int J Gynecol Pathol.* 1999; 18:58-62.
5. Ramalakshmi Pullela VB, Das S, Chunduru B, Dua S. A case of ovarian leiomyoma with cystic degeneration. *Indian J Pathol Microbiol.* 2009; 52:592-4.
6. Khaffaf N, Khaffaf H, Wuketich S. Giant ovarian leiomyoma as a rare cause of acute abdomen and hydronephrosis. *Obstet Gynecol.* 1996; 87:872-3.
7. Lerwill MF, Sung R, Oliva E, Prat J, Young RH. Smooth muscle tumors of the ovary: A clinicopathologic study of 54 cases emphasizing prognostic criteria, histologic variants, and differential diagnosis. *Am J Surg Pathol.* 2004; 28:1436-51.
8. McCluggage WG. Immunohistochemical markers as a diagnostic aid in ovarian pathology. *Diagnostic Histopathology.* 2008; 14(8):335-51.
9. Al-Shaikh AF, Darwish A, Nagraj V, Alsada A. A rare combination of ovarian and uterine leiomyomas with goblet cell carcinoma of the appendix. *Case Rep Surg.* 2015.
10. Tomas D, Lenicek T, Tuckar N, Puljiz Z, Ledinsky M, Kruslin B. Primary ovarian leiomyoma associated with endometriotic cyst presenting with symptoms of acute appendicitis: A case report. *Diagn Pathol.* 2009; 4:25.
11. Koo YJ, Cho YJ, Kim YJ, Lee JE, Kim JM *et al.* Ovarian leiomyoma as a potential cause of compromised fertility. *Fertil Steril.* 2011; 95:1120.
12. Wei C, Lilic N, Shorter N, Garrow E. Primary ovarian leiomyoma: a rare cause of ovarian tumor in adolescence. *J Pediatr Adolesc Gynecol.* 2008; 21(1):33-6.