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Original Research Paper

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PRIMARY OVARIAN LEIOMYOMA IN A YOUNG GIRL- A DIAGNOSTIC DILEMMA

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ABSTRACT Leiomyoma is one of the rarest solid tumors of the ovary, it accounts for 0.5-1% of all the benign ovarian tumors.1 It is usually diagnosed incidentally during ultrasound examination or pathologic examination after surgery. We hereby describe a case of primary ovarian leiomyoma in a young girl. Because there is no pathognomic symptoms or characteristic imaging findings, the correct diagnosis of an ovarian leiomyoma requires identification of the smooth muscle nature of the tumor. This rare tumor of the ovary should be considered in the differential diagnosis of solid ovarian masses. An immunohistochemical analysis is recommended for definitive diagnosis.

KEYWORDS : Leiomyoma, benign, smooth muscle tumor, immunohistochemical

INTRODUCTION-

Ovarian leiomyomas either primary or parasitic in origin, account for about 0.5-1% of all benign ovarian tumours.[1] It arises from ovarian tissue, intra-ovarian blood vessels and smooth muscle fibers. Majority of these tumors are discovered incidentally, with about 80% of the cases occurring in pre-menopausal women.[2] Due to their rarity only about 70 cases of primary ovarian leiomyomas have been reported worldwide. First case was reported by Sangalli in 1862.[2] We are here describing a case of unilateral ovarian leiomyoma in a young girl.

CASE REPORT-

A 21 yr old unmarried girl was admitted to our hospital with complaint of lump in abdomen and pain with secondary amenorrhea since 10 months.Her pain was initially intermittent and mild in nature but gradually the episodes of pain increased in frequency and duration. Her previous menstrual cycles were regular.She had no complaints related to bowel and bladder. On general examination the patient was thin built with average nutrition.Her general and systemic examination revealed no significant abnormality. On per abdominal examination a firm to hard solid mass of size 10x10 cm was detected in lower abdomen in suprapubic region. Trans abdominal ultrasonography revealed a well defined solid heterogenous lesion of approximately 13x11x13cm in the pelvis in midline and right adenexal region with mild internal vascularity and few foci of calcification and necrotic areas giving a probable diagnosis of pendunculated subserosal or broad ligament fibroid. In ultrasonography no other abnormality was found. Computed tomography scan also showed subserosal fibroid. Myomectomy was planned but in view of her large mass pre operative uterine artery embolisation was done.Laparotomy was performed. A large solid right sided ovarian tumor of 13X15cm with intact capsule was found. Uterus and left ovary were normal.(Figure 1)

Right ovariotomy was done.On gross examination it was a solid, homogenous mass(Figure 2) with cut surface showing grey white whorled appearence with no areas of haemorrhage or necrosis(Figure 3). Specimen was sent for histopathological examination.

Histopathological report showed irregular bundles and whorling of spindle shaped cells with no atypia or pleomorphism(Figure 4). Hyaline degeneration was seen. This confirmed the diagnosis of ovarian leiomyoma. Post operative period was uneventful. Patient was discharged on 10th post operative day and on follow up patient reported the resumption of menstrual cycle every month.

DISCUSSION-

Primary ovarian leiomyomas are very rare. Occurs most commonly between 20-65 yrs of age.[3] They are mainly asymptomatic and discovered accidentally during operation for uterine fibroids or other pathologies. In our case also it was discovered at the time of surgery. In symptomatic cases, clinical presentations are variable like abdominal pain, a palpable mass, hydronephrosis, elevated CA-125.[4,5] But in our case patient presented with pain and lump in abdomen with a normal CA-125.

Primary ovarian leiomyoma should also be distinguished from tumors arising from the broad ligament and extending into the hilum of ovary or wandering leiomyoma.[6]

The literature has reported that many patients with ovarian leiomyomas are nulligravidas.[7] In our case also patient was an unmarried nulligravida. This suggests that estrogen may play a role in the development of ovarian leiomyoma.[7] But other reports also suggests that the tumor can originate from the smooth muscle cells in the wall of blood vessels.

In our case the tumor was discovered incidentally intraoperatively. Some theories hypothesize that the tumor may originate from hilar blood vessels, smooth muscle metaplasia of ovarian stroma or theca externa cell.[1,6] Differential diagnosis include fibroma, thecoma, Granulosa cell tumor, sertoli leydig cell tumor and signet ring stromal tumor.[8,9] Leiomyosarcoma, spindle cell carcinoma and metastatic gastrointestinal stromal tumors also should be excluded in case of large tumors.

Primary ovarian fibroid is usually <3cm,[10] but the size of tumor is relative large in our case which was 13x11x13cm. In ultrasound it is difficult to distinguish ovarian fibroid from other ovarian tumors. To confirm the diagnosis immuno histochemical staining with smooth muscle actin is done.[8,11] In our case also ultrasonography gave a probable diagnosis of subserosal fibroid or broad ligament fibroid and the final diagnosis of ovarian leiomyoma was obtained on histopathology.

A common surgical approach to ovarian leiomyomas in middle aged to elderly patients is hysterectomy with bilateral salpingo-oophorectomy. But in young patients unilateral salpingo-oophorectomy can be done.

CONCLUSION-

Primary ovarian leiomyomas are very rare. Preoperative diagnosis of these tumors is usually not possible. But these tumors have excellent prognosis without any recurrence. Histopathology is the gold standard for diagnosis.

We should make best possible efforts to perform less invasive surgeries like laparoscopy in young women to preserve their fertility.

FIGURES

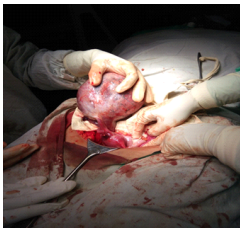

Figure1- intraoperative picture of uterus along with ovarian leiomyoma and normal opposite ovary

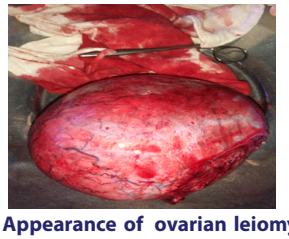

Figure2 - Gross Appearance of ovarian leiomyoma.

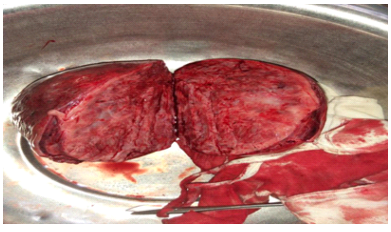

Figure 3 -cut section of ovarian leiomyoma.

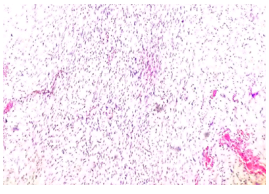

Figure 4- microscopic appearance of smooth muscle cells.

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