CASE REPORT

PRIMARY OVARIAN LEIOMYOMA ASSOCIATED WITH MULTIPLE UTERINE LEIOMYOMAS: A CASE REPORT
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ABSTRACT
Leiomyoma is a benign mesenchymal tumour, occurring frequently in uterus. But ovarian leiomyoma is rare, accounting less than 1% of all ovarian tumours. Ovarian leiomyoma is associated with uterine leiomyoma in about 78% of the cases. Being asymptomatic they are often incidentally detected in most of the patients. This is a case of ovarian leiomyoma associated with uterine leiomyomas in a 53 year old woman who had abdominal mass on examination during her regular check-up. Ultrasonography revealed multiple uterine fibroids and a unilocular cyst in right ovary. Total abdominal hysterectomy with bilateral salpingoophorectomy was performed. Gross examination showed left ovary totally replaced by grey-white firm mass. Microscopic features were typical of leiomyoma and was confirmed immunohistochemically. Major differential diagnostic considerations for this tumor in ovary were fibroma, thecoma and leiomyosarcoma. Though rare, ovarian leiomyoma should be considered in differential diagnosis of ovarian solid mass. The immunohistochemical staining with desmin, inhibin, and α-smooth muscle actin are useful to rule out the differential diagnosis.

INTRODUCTION
Leiomyoma is a benign mesenchymal tumour occurring frequently in the uterus. Ovarian leiomyoma is very rare, incidence being less than 1% of all ovarian tumors.1 This tumour may arise from smooth muscle metaplasia within the ovarian parenchyma or endometriosis, from the wall of ovarian vessels, or within the teratoma.2,3 Most of these tumours are unilateral, small, and are discovered incidentally.4,5 Preferred mode of diagnosis for this tumour is ultrasonography and MRI, however, it becomes difficult to differentiate from other mesenchymal tumours: fibroma and fibrothecoma. Histopathology and immunohistochemistry have a major role in the confirmatory diagnosis of this tumor.1,2

CASE REPORT
A 53-year-old woman was found to have an abdominal mass on examination during her routine check-up. Her blood parameters were within normal range. The specimen received for pathological examination consisted of the uterus, cervix, bilateral ovaries, and fallopian tubes. Grossly, multiple subserosal and intramural nodules were observed ranging from 0.5 to 5 cm. Right ovary measured 3x2x2 cm and multiple cystic spaces largest one measuring 2x2 cm was noted. There was a left ovarian mass with an intact capsule measuring 9x8x8 cm. This mass was not attached to the uterus and fallopian tubes (Figure 1).

Figure 1: Gross specimen of uterus, cervix, right ovary and bilateral fallopian tubes
Cut sections through multiple subserosal, intramural nodules and ovarian mass showed a greyish-white whorled appearance. There was no necrosis and haemorrhages (Figure 2).

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DISCUSSION

Most ovarian leiomyomas are asymptomatic, unilateral and are discovered incidentally during routine physical examination, surgery, or at autopsy. This tumour usually occurs between the ages of 20-65 years, especially in perimenopausal women. Symptomatic patients may present with abdominal pain, palpable mass, and Meigs syndrome. In this case, the patient was perimenopausal and had no symptoms associated with the ovarian tumour that was incidental postoperative findings.

These tumours are often misdiagnosed as pedunculated uterine myoma, ovarian fibroma, or endometrioma before surgery. Ovarian leiomyoma has very characteristic macroscopic and microscopic findings but as it is a rare tumour other tumour should be included in the differential diagnosis. Ovarian leiomyomas should be differentiated from ovarian fibromas, thecomas, cellular fibromas, sclerosing stromal tumours, and leiomyosarcomas. For confirmation of the diagnosis, immunohistochemistry staining with desmin, inhibin, and smooth muscle actin should be done. Desmin shows diffuse positivity in leiomyoma whereas fibromatous tumours are negative or focally positive.

Microscopically, an ovarian leiomyoma contains interlacing bundles or whorls of spindle-shaped cells with blunt-ended cigar-shaped nuclei, low mitotic counts without necrosis, and cellular atypia similar to uterine leiomyomas. Similar microscopic findings were seen in the present case. The diffuse strong positive staining for smooth muscle actin (SMA) is valuable for the diagnosis of a leiomyoma.

Primary ovarian leiomyoma should be differentiated from leiomyosarcoma. Nuclear atypia, necrosis, and mitotic counts are considered differentiating features between leiomyoma and leiomyosarcoma.

In our case, there is the coexistence of uterine leiomyoma with ovarian leiomyoma, which is rare. Primary ovarian leiomyoma was diagnosed from microscopic findings coincident with leiomyomas, positive staining for smooth muscle actin, desmin, and the location of the tumour being in the ovary.

CONCLUSION

Though rare, ovarian leiomyoma should be considered in differential diagnosis of ovarian solid mass. The immunohistochemical staining with desmin, inhibin, and smooth muscle actin are useful to rule out the differential diagnosis.


