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Case Reports

A large ovarian leiomyoma discovered incidentally in a 76-year-old woman: case report

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Summary

Background: Ovarian leiomyoma is very rare type of ovarian tumor. This benign tumor is seen in the pediatric age group to premenopausal women. *Case:* A 76-year-old woman had a huge leiomyoma (19 x 11 x 10 cm) of the right ovary. The preoperative diagnosis was difficult to distinguish from a broad ligament leiomyoma or ovarian cancer. *Conclusions:* Although theses tumors are benign, its extreme rarity led us to report an additional and rather unusual case of ovarian leiomyoma, and to focus some attention on this type of tumor.

Key words: Leiomyoma; Ovary; Solid tumor.

Introduction

Leiomyoma is one of the rarest solid tumors of the ovary and less that 60 cases have been reported in the literature. Those tumors are only occasionally seen in the pediatric age group [1-3] to premenopausal women [4-10]. A majority of such tumors are small sized and they are discovered incidentally. It therefore appears justified to report an additional and rather unusual case of ovarian leiomyoma, and to focus some attention on this type of neoplasm.

In this report, we present a case of a huge primary ovarian leiomyoma found in a 76-year-old woman whose preoperative diagnosis was difficult to distinguish from a broad ligament leiomyoma.

Case Report

A 76-year-old woman (gravida 2, para 2) who had been in menopause for 25 year visited the local physician because of abdominal discomfort. A huge mass was palpated in the pelvis extended to the umbilicus, and ultrasonography of her abdomen and pelvis revealed the presence of a huge solid tumor which arose out of the pelvis. This huge mass seemed to be originated from the one side ovary. She was introduced to us to have a gynecologic examination.

The pelvic examination and transvaginal ultrasonography revealed the presence of a huge solid tumor with hypoechoic irregular area. The tumor was hard and easily palpated through the abdominal wall, of which movability was limited. These findings suggested the possible malignant potential of this tumor. However, this tumor did not accompany with large amount of ascites and laboratory tests showed that the levels of serum tumor markers or LDH were all within the normal range, except slight increase of CA125 level 49.9 U/ml (normal < 37). The magnetic resonance image (MRI) revealed that the tumor had an irregular shape with a smooth border and consisted of both solid and cystic part (Fig.1). It occupied almost whole the pelvis and grew out to the extrapelvic space. However, the little enlarged appearance of uterine corpus was also seen. Additionally, no sign of distant metastasis or pelvic lympadenopathy were observed.

The differential diagnosis of this huge tumor included broad ligament leiomyoma, left ovarian solid tumor, and ovarian cancer. On laparotomy, the huge tumor occupied almost the entire pelvic cavity. Only small amount of ascites was observed and the parietal and visceral peritoneum was smooth. The tumor was found to only slightly adhere to the omentum and mesentery. It was originated from right ovary, extending to the retroperitoneal space under the broad ligament. She underwent bilateral salpingo-oophorectomy and total hysterectomy. We did not perform the extirpation of the omentum, upper abdomen, and retroperotoneal lymph nodes. Because of low malignant possibility, based on the findings, it would be better to perform further operation later after obtaining the final precise histological diagnosis of this ovarian tumor.

The tumor measured 19 x 11 x 10 cm (Fig.1). Its surface was smooth, and the cut surface was firm and white. No capsule rapture or adhesion observed. The microscopic examination showed irregular bundles and whirling of the spindle-shaped cells with elongated blunt nuclei (Fig.2). There was no atypia or pleomorphism and there were 2-3 mitotic figures per 10 high-power fields. Cystic areas with varying degrees of hyaline degeneration and myxomatous changes were also present. There was no trace of normal ovarian tissue.

The postoperative period was uneventful.

Discussion

Ovarian leiomyoma, a rare benign tumor, is most often seen in premonopausal women (up to 85% of cases)[4-10] and accounts for 0.5-1% of all benign ovarian neo-

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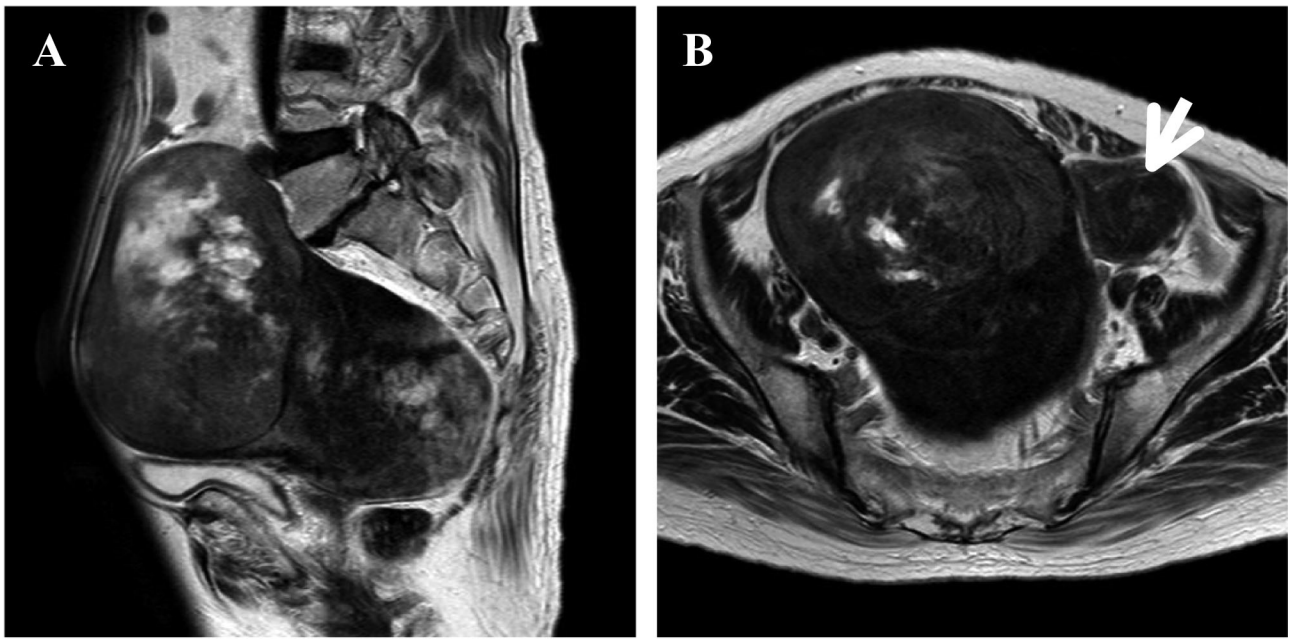

Figure 1. — Saggital (a) and axial (b) T2-weighted MR images showing a huge pelvic heterogenous mass associated with little enlarged uterus (arrow).

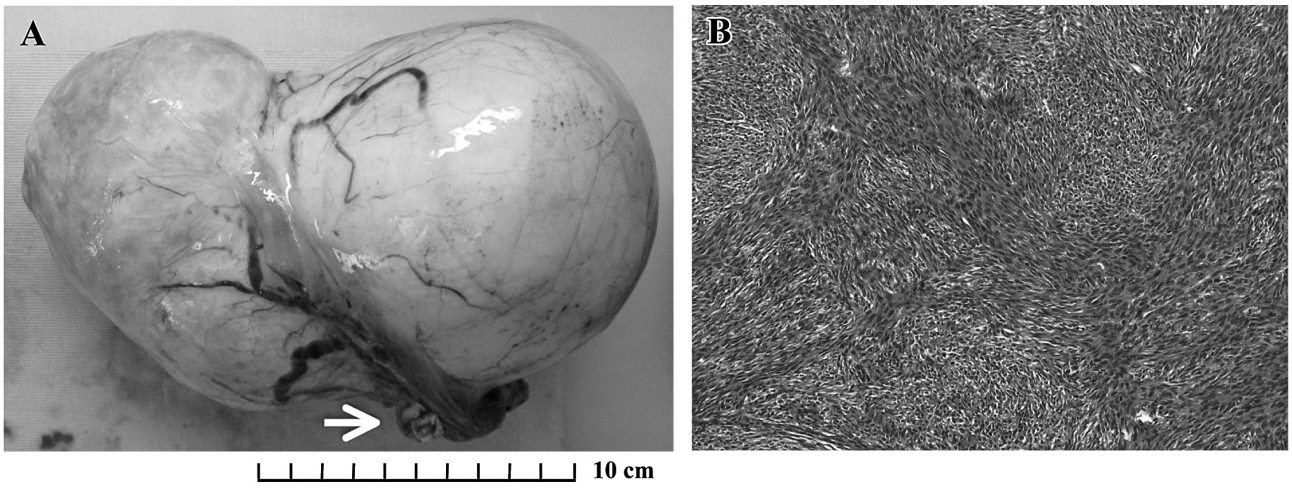

Figure 2. — (a) Macroscopic findings for the extirpated tumor. The external surface was smooth. The arrow shows infundibulopelvic ligament edge. (b) The tumor is composed of fascicles of spindle-shaped cells (H&E, x100).

plasms [11, 12]. There are a number of theories of the origin of these tumors. They most likely arise from smooth muscle cells in the ovarian hilar blood vessels, but other possible origins include cells in the ovarian ligament, smooth muscle cells or multipotential cells in the ovarian stroma, undifferentiated germ cells, or cortical smooth muscle metaplasia.

These tumors may be found by chance during routine physical examination or incidentally at surgery of autopsy [1, 13]. Clinically, many patients are asymptomatic. When symptoms are present, a variety of clinical presentations has been described: abdominal pain, a palpable mass, hydrothorax and/or ascites, hydronephrosis, slight elevated tumor marker CA125 [2, 3, 14-18]. Case reports show a unilateral predominance, with no predilection for left or right ovary.

Other smooth muscle processes that can involve the ovary include parasitic uterine leiomyomas, ovarian smooth

muscle metaplasia, intravenous leiomyomatosis, and leiomyomatosis peritonealis disseminata [1, 19]. Leiomyoma can also arise adjacent to the ovary in the broad ligament. Primary ovarian leiomyoma must also be differentiated from a pedunculated subserosal uterine leiomyoma, which may have lost its original attachment and has instead become attached to the ovary, thus deriving its blood supply. The co-existence of an ovarian leiomyoma with a uterine leiomyoma has been reported by several authors [5, 6]. There was no associated uterine leiomyomatosis in our case. The tumor in the present case was of ovarian origin, because it replaced nearly the entire ovary and the normal ovarian tissue could not be discerned.

Once the smooth muscle nature of the tumor is known, leiomyoma must be differentiated from leiomyosarcoma. The histological features of malignancy have not been well defined due to the rarity of these tumors. Pathologists have traditionally utilized criteria that emphasized the level of mitotic activity [11]. However, Prayson and Hart [19] have described two cases of mitotically active ovarian leiomyoma which had a subsequent clinically benign course. Clearly, the significance of other factors such as necrosis and cellular atypia, which are now used in the evaluation of uterine smooth muscle tumors [20], needs to be determined.

In summary, primary ovarian leiomyoma, although extremely rare, must be considered in differential diagnosis of pelvic solid tumor; it clinically and radiologically mimicked a broad ligament leiomyoma. The accurate diagnosis may be most frequently made at the time of exploratory laparotomy.

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