

Case Report

Giant abdominopelvic retroperitoneal leiomyoma

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Primary giant retroperitoneal leiomyoma are rare pelvic benignomas with about a hundred described in the literature. We present a case of an extremely large abdominopelvic retroperitoneal solid tumor (leiomyoma) in a 43-year nuligravida, 38 × 30 × 21 cm, weight 8600 g, resolved by tumorectomy with full recovery and fertility preservation.

Keywords

Myoma; Retroperitoneal tumor; Tumorectomy

1. Introduction

Primary giant retroperitoneal myoma, most commonly leiomyomas (PGRLM), are rare pelvic benignomas with about a hundred described in the literature [1, 2]. Increased abdominal growth in non-pregnant women may indicate large ovarian benignomas/malignomas with ascites or parasitic uterine myomas and other intrabdominal tumours. We present a case of an extremely large abdominopelvic retroperitoneal solid tumor (leiomyoma) resolved by tumorectomy with uterine and adnexal preservation.

2. Case report

The 43-year-old teacher, nuligravida, *virgo intacta*, without comorbidities, a neat personal and family history, noticed an increase in the abdomen over several months with occasional pain and defecation disorders with constipation and elephantiasis of the legs. The menstrual cycle was regular, for personal reasons she did not realize the pregnancy, she never visited a gynecologist. On a systematic examination, an ultrasound of the abdomen was performed and a giant solid tumor mass was found that fills the entire abdomen and was referred urgently to a gynecologist. Laboratory findings of hemograms, biochemical tests and oncomarkers were normal, except for mild anemia (Hgb 108 g/L). The multi-slice computed tomography (MSCT) of the abdomen and thorax indicated an expansive abdominopelvic mass, solid giant tumor 38 × 30 × 21 cm starting from the pelvis to the xyphoid by moving all organs, including the liver and kidneys, morphologically corresponding to the giant retroperitoneal myoma (Fig. 1,2). Under general endotracheal anesthesia, a me-



Fig. 1. Multi slice-mputed tomography of the abdomen: giant solid tumor.

dian laparotomy is performed from xyphoid to symphysis and shows a left-sided retroperitoneal giant solid tumor with a dextroplated and torquated small normal uterus and adnexa (Fig. 3,4). The peritoneum is incised and with hemostasis by ligation of blood vessels he manages to perform a total tumorectomy and remove the tumor 8600 grams (Fig. 5). On exploration of the abdomen there were no additional abnormalities detected, uterus and adnexa were preserved. The retroperitoneum closes, drains and sews the abdominal wall. The postoperative course went smoothly, the wound healed primarily and the patient left the hospital on the 7th postoperative day.

Pathohistological findings indicated leiomyoma: a hard, solid white tumor, with bundles of connective tissue and bundles of multiplied smooth muscle with foci of individual and

smaller clusters of mature fat cells, without atypia (Fig. 6), Ber-EP 4 neg, vimentin positive.

The patient consented to the publication of a case report with publication according to all ethical principles that have been applied.

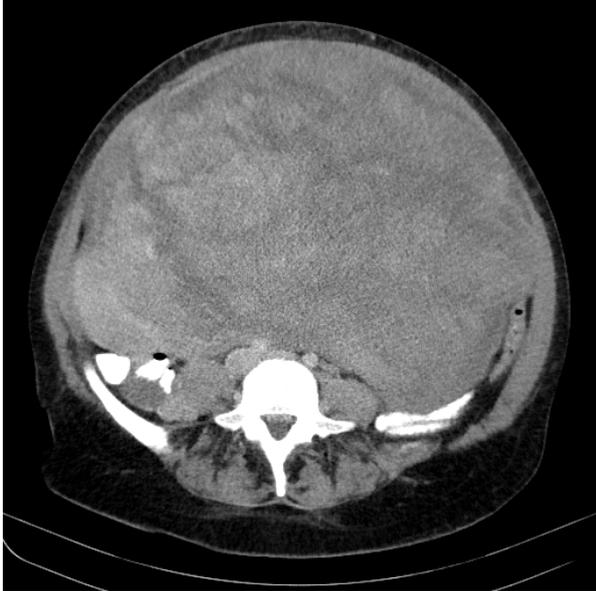


Fig. 2. Transversal multi-phase computed tomography of the abdomen: giant solid tumor.



Fig. 3. Preoperative findings of the large abdominopelvic tumor.

3. Discussion

Pelvic leiomyomas are thought to be separate primary lesions of mesometrial tissue origin of about 1 cm bundles located parallel to the Fallopian tube with expansion toward the free pelvic space. Constructed of smooth muscle cells may have estrogen/progesteron receptors (ER/PR) [3]. Chronic pelvic pain, dysmenorrhea, abdominal enlargement, problems with urination (urinary retention, hy-

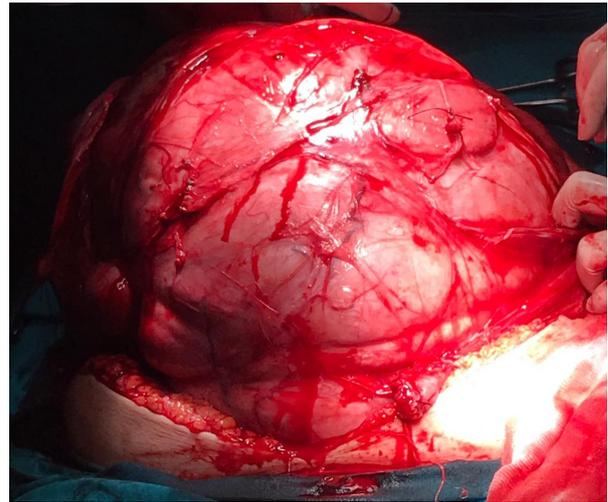


Fig. 4. Intraoperative findings of the retroperitoneal solid large tumor.

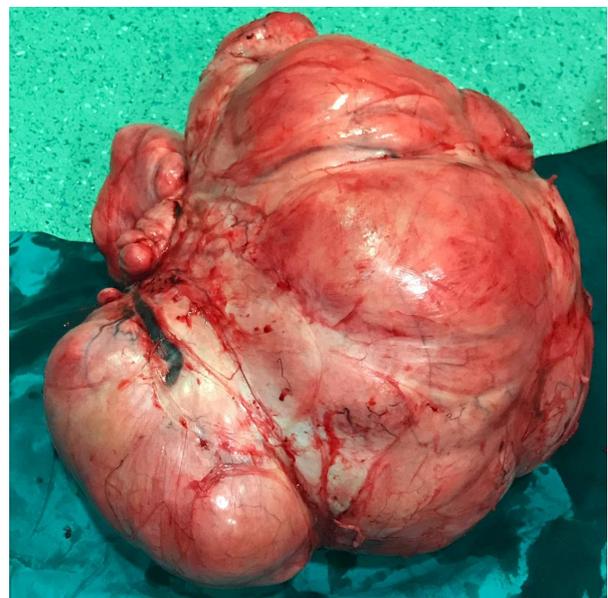


Fig. 5. Postoperative findings of extirpated giant retroperitoneal myoma 38 × 30 × 22 cm.

droureteronephrosis) or defecation and constipation are the most common signs of pelvic tumor formation that is most commonly associated with myomatous uterus or adnexal pelvic mass [2]. Imaging methods detect retroperitoneal tumor, solid or solid-cystic structure with distortion of pelvic or intra-abdominal anatomy depending on the size of the tumor associated with the uterine wall or without it. Sayer *et al.* showed PGRLM with rectal wall destruction where resection and primary bowel anastomosis were performed [4]. Kang [5] described three isolated retroperitoneal multifocal tumor masses that were PGRLM, as well as Lin *et al.* who described an 8 cm tumor as a cause of acute abdomen with defecation disturbances and acute pelvic pain [6].

In the study of Poliquin and al. mean age of 105 de-

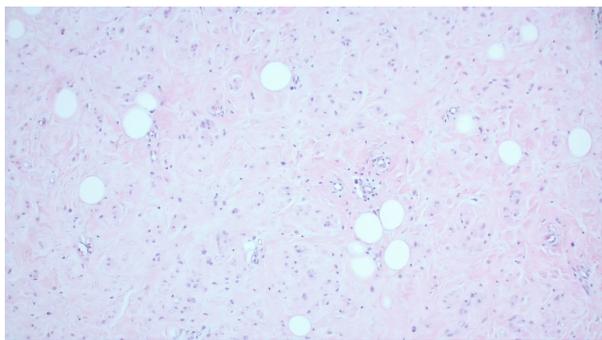


Fig. 6. Pathohistological findings of leiomyoma HE 100 x: bundles of connective tissue and bundles of multiplied smooth muscle with foci of individual and smaller clusters of mature fat cells, without atypia.

scribed retroperitoneal leiomyoma in literature 1941-2007. was 46.27 years, 40% of patients had either undergone hysterectomy for uterine leiomyomata previously or had concurrent uterine leiomyomata, median leiomyoma size was 12.0 cm (range 2.0-37.0 cm) m 25% were asymptomatic, 31.3% experienced abdominal fullness, 18.8% had urinary symptoms, 18.8% had weight loss, and 18.8% had pelvic pain [2]. Paala and Miettinen described 56 retroperitoneal leiomyoma, patients were middle-aged, tumor size averaged 16.2 cm and weight 1600 g, tumors were positive for alpha-SMA, desmin, ER and PR in a statistically significant number, and negative for CD117, S100 protein, and HMB45 and all but one for CD34 [9].

Giant tumors measuring 22 cm [1], 10 × 8 [6], 2-37 cm [2] in size were described in the literature, Habek *et al.* [7] described a retroperitoneal paraovarian myxoma weighing 6700 g and this PGRPM described so far is probably the largest in the literature (38 cm, 8600 g).

They have been described in all periods of a woman's life from childhood to postmenopause, and rapid growth especially at a younger age may indicate sarcomatous alteration which is associated with high mortality. Rapid and extensive growth of retroperitoneal benignomas is rare, so that the suspicion of malignancy is justified and requires extensive oncological imaging and laboratory preoperative staging because planned of therapy. The suspicion of sarcoma is aroused by the extremely rapid infiltrative growth of the tumor with cachexia. Infiltration of retroperitoneal organs, especially the inferior vena cava and aorta, prevents primary tumorectomy, so the therapeutic procedure is primarily non-operative, and if tumor reduction occurs, tumorectomy is performed [2, 6, 8].

Smaller tumors can be evaluated and treated with a laparoscopic approach, while large tumors require exploratory laparotomy, and preoperative embolization can be done in cases of copious anastomoses and reduced bleeding [2, 8]. Although mostly large or gigantic in size, tumorectomy of PGRM is definitely a surgical treatment with a good prognosis and complete recovery. In women of childbearing age, it is possible to preserve the uterus and adnexa as shown in

our case report.

4. Conclusions

PGRPLMs are benignomas of large and rapid growth, independent of the uterus with posterior retroperitoneal propagation and distortion of the abdominopelvic organs. Preoperative imaging evaluation is necessary to plan the operation, and tumorectomy after immunohistochemical differentiation of the benignomas, guarantees complete recovery.

Highlights

- Giant abdominopelvic retroperitoneal myoma.
- Tumorectomy with full recovery.

Author contributions

DH, ATL, IŠ, LL: Project development, Data Collection, Manuscript writing AK, GS: Data Collection.

Ethics approval and consent to participate

The patients gave their informed consent for inclusion before they participated in the study. The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by the Clinical Hospital Ethics Committee.

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Conflict of interest

The authors declare no conflict of interest.

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