

Giant cystic leiomyoma with uterine location: A case report

 Tugba Gunler¹,  Hasan Ali Inal²,  Zeynep Ozturk Inal¹

¹Department of Pathology, Konya Education and Research Hospital, Konya, Turkey

²Department of Gynecology, Konya Education and Research Hospital, Konya, Turkey

Copyright@Author(s) - Available online at www.annalsmedres.org

Content of this journal is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.



Abstract

The uterine leiomyomas frequently encountered in gynecological practice originate from myometrial smooth muscle cells and can range in size from microscopic to huge. Giant leiomyomas are extremely rare and can be confused with ovarian or localized retroperitoneal neoplasias due to their nonspecific clinical presentation and degeneration. Herein, we report a 41-year-old patient who presented with irregular menstruation and abdominal pain. Ultrasonography revealed a solid mass located between the uterus and the bladder with cystic areas measuring 21×18 cm. Total abdominal hysterectomy and left salpingo-oophorectomy were performed. In the macroscopic examination, a 1300 g, 21×18×6-cm cystic structure with a multiloculated appearance and solid areas was observed. On histopathological examination, the patient was diagnosed with a leiomyoma with cystic degeneration. She was discharged on the second postoperative day without complications.

Keywords: Cystic degeneration; giant myoma; uterus

INTRODUCTION

Leiomyomas with benign characteristics originating from smooth muscle cells in the myometrium are observed in almost half of women over the age of 35 (1,2). Although the etiopathogenesis of leiomyomas is still unknown, estrogen, progesterone, and some other growth factors are thought to be related to their development. In addition, the existence of many risk factors, such as family history, nulliparity, black race, obesity, red meat consumption, and hypertension, has been suggested (3). Leiomyomas, which can be single or multiple, can range from small to giant sizes. Giant leiomyomas with cystic degeneration are very rare, and it is clinically important to perform a differential diagnosis with radiological imaging to avoid confusion with neoplasms located in the ovaries or retroperitoneum (1,3).

Herein, we report a 41-year-old woman with a giant cystic leiomyoma who presented with irregular menstruation and abdominal pain.

CASE REPORT

A 41-year-old multiparity woman presented to the emergency gynecology unit of our hospital complaining for more than one year with irregular menstrual bleeding

and abdominal pain. She had no known additional disease, previous surgery, or history of malignancy in her family. A cystic mass located between the bladder and the uterus, measuring 21×18 cm and containing solid areas, was observed during the pelvic ultrasonography examination of the patient, whose vital signs were monitored within the normal limits. A midline subcutaneous laparotomy was performed in the patient, and her blood count, biochemical, and tumor marker values (CA 125=12.36 U/mL, CA 15-3=12.45 U/mL, CA-19.9=4.86 U/mL, CEA=2.21 ng/mL, and AFP=1.38 U/mL) were normal. In the macroscopic examination, a cystic mass with a subsequent localized solid area weighing 1300 g and measuring 21×18×6 cm was observed on the anterior wall of the uterus (Figure 1 A,B). The patient underwent a total abdominal hysterectomy and left salpingo-oophorectomy, and the mass was sent to the pathology department for histopathological evaluation. In the macroscopic evaluation, the lumen of the fluid-filled cysts with bleeding, serous qualities had a regular appearance. There were no lesions in the uterine lumen or the cervix. The left ovary and tuba appeared normal. The cystic masses was reported to be benign in frozen section during the surgery. In the microscopic examination of the mass between the myxoid and wide cystic cavities, monophonic

Received: 03.06.2020 **Accepted:** 05.08.2020 **Available online:** 12.07.2021

Corresponding Author: Hasan Ali Inal, Department of Gynecology, Konya Education and Research Hospital, Konya, Turkey

E-mail: dr.hasanaliinal@yahoo.com

cells with oval-round nuclei in the hyalinized stroma were observed with eosinophilic cytoplasm, and onemitosis was observed in the ten high-magnification areas (Figure 2 C,D,E,F). In immunohistochemical evaluation, cells were stained positive with smooth muscle antigen (SMA) and desmin (Figure 3 G,H) and negatively stained with PanCK, S-100, DOG-1, CD117, CD34, and HMB-45. The Ki-67 proliferation index was about 1%. Based on the findings, the final histopathological evaluation of the patient was reported as cystic leiomyoma.



Figure 1: A and B. Giant leiomyoma located subserosally in the uterus

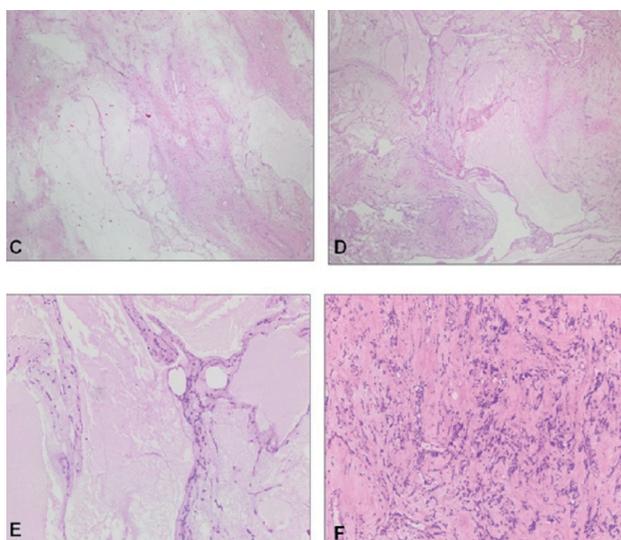


Figure 2: C, D, E, and F. Monotonous smooth muscle cells in stroma with cystic and hyaline degeneration (C, D: hematoxylin eosin (HE) $\times 20$, E, F: HE $\times 100$)

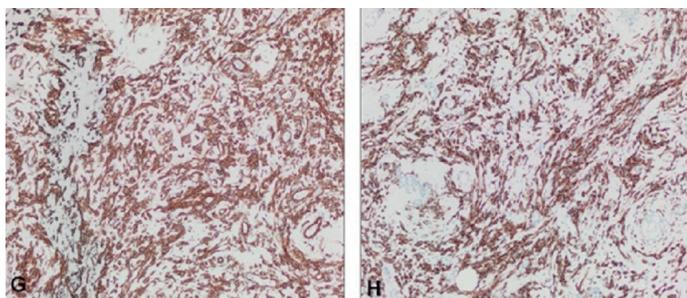


Figure 3: G and H. Immunohistochemical staining showing smooth muscle antigen and desmin positivity ($\times 100$)

DISCUSSION

Leiomyomas were first described in 1969 by Wisot et al., who reported a 13-year-old girl who had presented with bleeding complaints (4). The largest leiomyoma described in the literature weighed 63.3 kg, and according to their location, leiomyomas are classified as submucosal, intramural (most common), or subserosal (5). While small in size and potentially asymptomatic for a long time, especially in the subserosal location, leiomyomas can reach large sizes and cause symptoms such as abnormal uterine bleeding, pelvic pain, dysmenorrhea, infertility, constipation, frequent urination, preterm labor, myomatous erythrocytosis syndrome, and pseudo-Meigs' syndrome (6,7). Various degenerations, such as hyaline, cystic, myxoid, or red degeneration and dystrophic calcification, can be observed in leiomyomas that can reach varying sizes. The most frequently observed degeneration is hyaline, which occurs in approximately 60% of cases. Cystic degenerations are observed in only 4% of cases (8,9). In our case, a cystic mass 21 \times 18 cm in size was observed during the pelvic ultrasonographic examination. The mass was located between the bladder, uterus, and locally intact areas, and histopathological examination of the patient resulted in a diagnosis of a cystic leiomyoma.

Typical leiomyomas are easily diagnosed by imaging methods such as pelvic or transvaginal ultrasonography (USG). With magnetic resonance imaging (MRI), the location and number of leiomyomas can be accurately determined. Contrast MRI is a very useful imaging method in the differentiation of intrapelvic masses since solid masses hold contrast and cystic degenerate leiomyoma will not include contrast. In their study, Chopra et al. reported that the diagnostic accuracy of USG and MRI was 73% and 100%, respectively (10). Computed tomography may also be useful in patients with necrosis and malignant transformation (8,10).

CONCLUSION

Giant cystic leiomyomas are extremely rare and can cause various clinical symptoms. However, a differential diagnosis of tumors located in the abdominopelvic cavity must also include leiomyomas that reach large dimensions and contain degenerative changes. These cases are generally diagnosed by histopathological examination after laparotomy (4). Therefore, in cases where a large, localized abdominopelvic mass is observed, this entity should be kept in mind, and the treatment plan should be determined using the appropriate multidisciplinary approach.

Conflict of interest: The authors declare that they have no competing interest.

Financial Disclosure: There are no financial supports.

REFERENCES

1. Wronski K. Giant uterine leiomyoma: case report and review of literature. *New Med* 2014;3:89-91.

2. Gupta S, Manyonda I. Acute complications of fibroids. *Best Pract Res Clin Obstet Gynaecol* 2009;23:609-17.
3. Ezugwu EC, Iyoke CA, Ezugwu FO, Ugwu G. Successful Pregnancy Following Myomectomy for Giant Uterine Fibroid in an Infertile Woman. *J Reprod Infertil* 2014;15:233-6.
4. Wisot AL, Neimand KM, Rosenthal AH. Symptomatic myoma in a 13-year-old girl. *Am J Obstet Gynecol* 1984;105:639-41.
5. Evans III AT, Pratt JH. A giant fibroid uterus. *Obstet Gynecol* 1979;54:385-6.
6. Vilos GA, Allaire C, Laberge PY, Leyland N. SPECIAL CONTRIBUTORS. The management of uterine leiomyomas. *J Obstet Gynaecol Can* 2015;37:157-78.
7. Savulescu F, Iordache I, Albița O, et al. Giant uterine leiomyoma. *Chirurgia (Bucur)* 2011;106:665-8.
8. Ardaens Y. Imagerie des fibromes [Imaging of fibromas]. *J Gynecol Obstet Biol Reprod (Paris)* 2007;36:23-30.
9. Inal ZO, Inal HA. Comparison of abdominal, vaginal, and laparoscopic hysterectomies in a tertiary care hospital in Turkey. *Ir J Med Sci* 2018;187:485-91.
10. Chopra S, Lev-Toaff AS, Ors F, Bergin D. Adenomyosis: common and uncommon manifestations on sonography and magnetic resonance imaging. *J Ultrasound Med* 2006;25:617-27.