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Giant uterine leiomyoma

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Rezumat

Leiomiom uterin gigant

Leiomioamele uterine sunt cele mai frecvente tumori ale tractului genital feminin. Leiomioamele uterine gigante sunt tumori foarte rare şi reprezintă o mare provocare diagnostică si terapeutică. Acest articol prezintă cazul unei paciente în vârstă de 45 de ani internată în clinica noastră de chirurgie cu un istoric de creştere progresivă a taliei în decursul ultimelelor 10 luni, cu dureri lombare, senzație de presiune abdominală, scădere ponderală, constipație şi polachiurie. Examenul fizic, investigațiile de laborator, echografia transabdominală şi tomografia computerizată au sugerat existența unei formațiuni tumorale gigante abdomino-pelvică. S-a practicat histerectomie supracervicală cu anexectomie bilaterală pe cale abdominală. Din punct de vedere histopatologic piesa de rezecție a fost un leiomiom uterin cu greutatea de 18.1 Kg măsurând 33/28/22 cm. Evoluția postoperatorie a pacientei a fost favorabilă, pacienta a fost externată în cea de a şasea zi postoperator.

Cuvinte cheie: leiomiom, tumoră gigantă, histerectomie supracervicală

Abstract

Uterine leiomyomas represent the most common benign tumors of the female reproductive tract. Giant uterine leiomyomas are very rare neoplasms and represents a great diagnosis and therapeutic challenge. This article illustrates a case of a 45-year old woman presented to our surgery department with a 10-month history of progressive increasing abdominal size, back pain, vague abdominal pressure sensations, weight loss, constipation and urinary frequency. Physical examination, laboratory evaluation, transabdominal ultrasound and computed tomography scanning suggested a giant abdominopelvic mass. Abdominal supracervical hysterectomy with bilateral salpingo-oophorectomy was performed. Histologically, the specimen was a 18.1 Kg uterine leiomyoma measuring 33/28/22 cm. The patient's postoperative evolution was uneventful and she was discharged from the hospital in the sixth postoperative day.

Key words: leiomyoma, giant tumor, supracervical hysterectomy

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Introduction

Uterine leiomyomas are common, benign, smooth muscle tumors of the uterus. They are found in nearly half of women over age 40; the prevalence increases during the reproductive age and decreases after menopause. (1-5) Originating from the myometrium, leiomyomas contain a variable percentage of fibrous tissue. The size of leiomyomas varies from microscopical to giant tumors (weighing 25 Pb-11.3 kg or more). Commonly

multiple, leiomyomas can be described submucosal, intramural, subserosal or pedunculated. Leiomyomas are often asymptomatic, but large tumors often produce: abnormal bleeding, pelvic discomfort (pressure or pain), dysmenorrhea, infertility, frequent urination, constipation, "myomatous erytrocytosis syndrome" or pseudo Meigs syndrome. Clinical examination (uterine enlargement with irregular contour and firm consistency) is the initial step in the diagnosis of a uterine leiomyoma. (1-5) Ultrasonography, computed tomography scanning and magnetic resonance imaging are often helpful to define the number, the size and the location of the myomas. (1-8) The treatment options includes: expectant management, drug therapy (gonadotropin-releasing hormone agonists), interventional procedure (uterine artery embolization) and surgical treatment. (9-20) Surgical management include: hysterectomy, myomectomy and myolysis. Hysterectomy (performed vaginally, abdominally or laparoscopically) is the definitive surgical approach. (9-16) Myomectomy (performed by laparotomy, laparoscopy or hysteroscopy) is an option for symptomatic women who decline hysterectomy or who desire to retain fertility. (9, 10, 18) Myolysis (including mono- or bipolar cautery, Nd-YAG laser vaporization or cryotherapy) is currently experimental. (9, 10, 17) Giant uterine leiomyomas are rarely tumors. (4, 5, 9, 21-32)

Case report

A 45 year-old woman was referred to our surgical clinic with gradually weight gain, increasing abdominal size, vague abdominal pressure sensations, dysmenorrhea, dyspareunia, menorrhagia, lower abdominal and pelvic pain, frequent urination and constipation. Her medical history was normal; she had no serious illness or surgical procedures before and no family history of malignancies. Her vital signs were all within normal limits. General physical examination was normal except a protuberant abdomen (Fig. 1). There was no generalized enlargement of lymph nodes. On abdominal examination abdomen was circumferentially distended from a painless, irregularly abdominal and pelvic mass of firm consistency, dullness on percussion-a solid mass. It was not possible to distinguish any abdominal viscera on palpation and percussion. No abdominal tenderness was present. Auscultation for bowel sounds completed the examination (sounds were heard in the flanks). After we performed the general systems examination, abdominal and breast examination (was normal) we proceeded to the pelvic examination (speculum and bimanual examination). The external genitalia and uterine cervix were normal but fornices of the vagina were full on pelvic examination. Gynecologic examination revealed a very large, firm, mobile (only horizontally), central mass that filled the pelvis and abdomen. It was difficult to specify the origin of tumor.

The results of routine laboratory testing including a complete blood count, levels of serum electrolytes, serum amylase, tests of liver and renal function, Pap smear result, were normal. Transabdominal ultrasound confirmed the presence of a grossly soft tissue mass containing areas of mixed echogenicity, very probably located in the posterosuperior wall of uterus, which filled the entire abdominal cavity. Contrast material-enhanced CT scan of the abdomen and pelvis showed a large unilocular, 35/29/25 cm, in the central portion of the pelvis (Fig. 2). The contour of the mass was deformed and we found no evidence of any excrescence within it. There were no omental implants or lymphadenopathy. In the light of the clinical examination, the routine laboratory findings and US and CT results, a solid abdominopelvic tumor (very probably genital mass) was the most likely diagnosis, but the exact origin was unclear.

In the operating room were performed supracervical hysterectomy and bilateral salpingo-oophorectomy. An abdominal midline xiphopubic vertical incision was made who allows us a good ability to manipulate pelvic organs and to expose the uterine and infundibulopelvic ligaments and uterine blood vessels. At laparotomy we found an enlarged bilobated, solid tumor arising from the uterus, with multiple subserosal fibroids, that filled the entire abdomen and compressed the abdominal organs (Fig. 3). Both the pelvis and the upper



Figure 1. *Preoperative evaluation: photograph of a 45 years-old woman with a distended abdomen from a large genital tumor*



Figure 2. *Preoperative evaluation: axial contrast-enhanced abdominal CT scan reveals a large mass that filled the entire abdominal cavity*

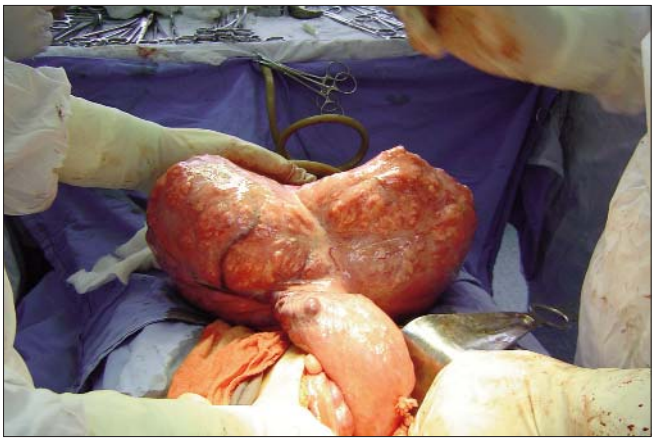


Figure 3. *The operative field: enlarged uterus with multiple smaller fibroids distorting the shape of the uterus*

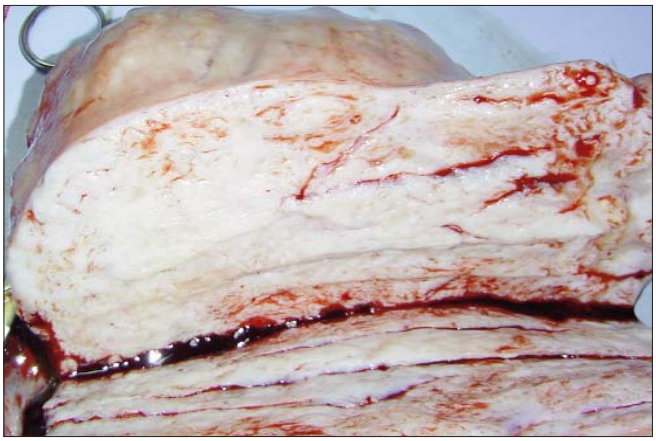


Figure 4. *Cut surface of the hysterectomy pathologic specimen showing multiple gray-white masses with whorled appearance– uterine leiomyoma*

abdomen were systematically explored (the liver, stomach, large and small bowel, genital tract were examined). The round and the infundibulopelvic ligaments were first clamped, then ligated and transected. After the bladder mobilization, the uterine blood vessels were skeletonized, clamped, transected and ligated. The uterus was cut off (sparing the cervix) and then removed with the ovaries and the fallopian tubes. The top of the uterine cuff was closed with sutures (incorporating the uterosacral and cardinal ligaments). The site of operation was finally inspected for evidence of bleeding. Excellent hemostasis was obtained. The tumoral mass was excised completely in the operation. All specimens were sent to pathology. Histologically, the specimen was a 18.1 Kg uterine leiomyoma measuring 33/28/22 cm (Fig. 4). After the surgical procedure the patient was hospitalized for 6 days. The patient's postoperative evolution was uneventful and she was discharged from the hospital in the sixth postoperative day.

Discussions and conclusions

If uterine leiomyoma is suspected the initial step is a pelvic examination, but myomas are difficult to palpate unless they are very large. The preferred imaging modality for the initial evaluation is ultrasonography because is the least invasive and the most cost-effective investigation. CT scans is also useful, but on leiomyomas are indistinguishable from healthy myometrium unless they are calcified or necrotic. MRI defines the anatomy of the uterus and ovaries, but availability and high cost are serious limitations. (1-8)

The treatment should be individualized, both the symptoms severity and the patient's desire to preserve fertility are very important. Asymptomatic fibroids must be kept under observation; but rarely uterine leiomyomas may suffer a sarcomatous degeneration. Uterine artery embolization produces infarction of myomas with low incidence of adverse effects. Medical management (Gn-RH agonists) is efficient for small myomas and in preoperative treatment to decrease tumors volume and blood loss before myolysis, myomectomy and hysterectomy but is associated with high cost and increased recurrence risk. Surgical treatments includes: hysterectomy, myomectomy and myolysis. Laparoscopic myolysis is associated with minimal blood loss and rapid recovery time but with risk of recurrence. Myomectomy preserves fertility but with increased recurrence risk and perioperative morbidity. (9-20)

Hysterectomy is associated with improved quality of life. Compared with the abdominal approach, vaginal and laparoscopic approaches are associated with less postoperative pain, shorter hospitalization and quicker recovery but with longer surgical times and important conversion rates to laparotomy. (9-16, 20) The difficult problems remain giving the accurate diagnosis and the appropriate therapeutic management of the giant abdominopelvic uterine tumors. In our case, perioperative and postoperative possible complications (hemorrhage, injury to bowel and urinary tract, infections, hematomas) were avoided using adequate surgical management and carefully perioperative care.

References

1. Hoffman B. Pelvic mass. In: Schorge J, et al editors. Williams Gynecology, Chapter 9. Ed. McGraw-Hill Companies; 2008. p. 197-224.
2. Courbiere B. Carcopino X. Fibromes uterins. In: Gynecologie Obstetrique. Ed. Vernazobres-Greco; 2006-2007. p. 359-365.
3. Pitkin J. Uterine fibroids. In: Obstetrics and gynaecology. Ed. Churchill Livingstone; 2003. p. 118-119.
4. Jonas HS. Giant uterine tumors: case report and review of the literature. Obstet Gynecol. 1977;50 (1 Suppl):2s-4s.
5. Grapsa D. A giant uterine leiomyoma simulating an ovarian mass in a 16-year-old girl: a case report and review of the literature. Eur J Gynaecol Oncol. 2006;27(3):294-6.
6. Hadden W. Ultrasound and the use of imaging in gynecology - Uterine pathology. In: Rosevear S, Handbook of gynaecology management. Ed. Blackwell Science; 2002. p. 173-176.
7. Wladimiroff J. Uterine fibroids. In: Ultrasound in obstetrics and gynaecology. Elsevier; 2009. p. 303-306.
8. Casillas J, Joseph RC, Guerra JJ Jr. CT appearance of uterine leiomyomas. Radiographics. 1990;10(6):999-1007.

9. Van Voorhis B. A 41-year-old woman with menorrhagia, anemia, and fibroids: Review of treatment of uterine fibroids. JAMA. 2009;301(1):82-93. Epub 2008 Dec 2.
10. Corton M, Cunningham F, Gala R, Hoffman B. Aspect of gynecologic surgery. In: Schorge J, et al, editors. Williams Gynecology, Chapter 38-40. Ed. McGraw-Hill Companies; 2008. p. 773-865.
11. Word L, Hoffman B. Surgeries for benign gynecologic conditions. In: Schorge J, et al, editors. Williams Gynecology, Chapter 41. Ed. McGraw-Hill Companies. 2008. p. 867-868; 905-910.
12. Sîrbu P. Chirurgia în patologia benignă a uterului. În: Sîrbu P, Chiricuta I, Setlacec D, Pandele A, editors. Chirurgia ginecologică, Vol. I. Ed. Medicală; 1981. p. 365-384.
13. Zollinger R. Gynecologic procedures. In: Atlas of surgical operations. Plate: CLXX-CLXXIII. Ed. McGraw-Hill; 1993.
14. Stovall T. Histerectomia. In: Berek J, et al, editors. Novak Ginecologie, Ed. a 12-a, Cap. 22. Ed. Medicală Callisto; 1999. p. 727-747.
15. Montefiore E. Surgical routes and complications of hysterectomy for benign disorders: a prospective observational study in French university hospitals. Human Reproduction. 2007;22(1):260-5.
16. Johnson N, Barlow D, Lethaby A, Tavender E, Curr L, Garry R. Methods of hysterectomy: systematic review and meta-analysis of randomised controlled trials. BMJ. 2005;330(7506):1478.
17. Donnez J, Squifflet J, Polet R, Nisolle M. Laparoscopic myolysis. Hum Reprod Update. 2000;6(6):609-13.
18. Lumsden MA. Embolization versus myomectomy versus hysterectomy: which is best, when? Hum Reprod. 2002;17(2):253-9.
19. Golan A. GnRH analogues in the treatment of uterine fibroids. Hum Reprod. 1996;11 Suppl 3:33-41.
20. Holloway RW, Patel SD, Ahmad S. Robotic surgery in gynecology. Scand J Surg. 2009;98(2):96-109.
21. Pérez M, Ramón JM. Large abdominal mass due to a giant uterine leiomyoma. Mayo Clin Proc. 2006;81(11):1415.
22. Fasih N, Prasad Shanbhogue AK, Macdonald DB, Fraser-Hill MA, Papadatos D, Kielar AZ, et al. Leiomyomas beyond the uterus: unusual locations, rare manifestations. Radiographics. 2008;28(7):1931-48.
23. Nappi L, Matteo M, Giardina S, Rosenberg P, Indraccolo U, Greco P. Management of uterine giant myoma. Arch Gynecol Obstet. 2008;278(1):61-3. Epub 2007 Dec 8.
24. Rubens DJ, Talarico HP, Zaepfel AC, VanZandt TF. General case of the day. Multiple giant leiomyomas of the uterus. Radiographics. 1989;9(5):964-7.
25. Karim T. A case of giant fibroid uterus in a adolescent girl. Calicut Medical journal. 2009;7(4):e6.
26. Socolov D. Fibrom uterin gigant asociat cu policitemie secundara. Prezentare de caz. Jurnalul de Chirurgie. 2005;1(2):203-5.
27. Panayotidis C. Giant uterine leiomyomas: dilemmas in surgical management. Gynecol Surg. 2006;3:37-40.
28. Akbulut M, Soysal ME, Duzcan SE. Giant lipoleiomyoma of the uterine corpus, Arch Gynecol Obstet. 2008;278(3):291-3. Epub 2008 Feb 19.
29. Nguyen-Duc H. Large uterine fibroma in a 15 year old adolescent. Giant leiomyoma in adolescence. J Gynecol Obstet Biol Reprod (Paris). 2003;32(8 Pt 1):748-50. [Article in French]
30. Oelsner G, Elizur SE, Frenkel Y, Carp H. Giant uterine tumors: two cases with different clinical presentations. Obstet Gynecol. 2003 May;101(5 Pt 2):1088-91.
31. Costa Benavente L, Silva Barroso F, Avila Flores E. Giant uterine myoma. Ginecol Obstet Mex. 2005;73(10):563-5. [Article in Spanish]
32. Evans AT 3rd, Pratt JH. A giant fibroid uterus. Obstet Gynecol. 1979;54(3):385-6.