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clinical practice

Surgical removal of multiple mesenteric fibroids (Kg 4,500) by abdominal spread of previous laparoscopic uterine myomectomy

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SUMMARY: **Surgical removal of multiple mesenteric fibroids (Kg 4,500) by abdominal spread of previous laparoscopic uterine myomectomy.**

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Introduction. *Huge and multiple mesenteric fibroids (4,500 Kg weight) are very unusual. In many cases they are mistaken for subserosal fibroids of the womb due to the proximity with uterine walls. When they have a rapid growth, the risk of becoming malignant (sarcoma) has not to be underestimated. Surgery is challenging to remove abdominal nodes.*

Case report. *A case of a 40-year old woman, admitted to the hospital with abdominal masses occupying the entire cavity was reported. Both computerized tomography (CT) and ultrasounds (US) were not diriment for belonging of tumours. Clinical history of patient reports a laparoscopic removal of uterine fibroids, using the morcellator. Laparoscopy was performed four years before. Open surgery by means of a large transversal suprapubic laparotomy according to Pfannestiel was carried out. Multiple and huge mesenteric, peritoneal and intestinal tumours spread in the whole abdominal cavity were found, removed and examined by frozen section histology; in addition a series of small conglomerated myomas in the site of previous laparoscopic transumbilical route was taken away as well (the largest fibroid weighed Kg 3.500 and the all tumors removed 4,500 Kg); the result was benign (fibroids) and genital apparatus was preserved. Operation was challenging. Postoperative course was uneventful; after five days patient was discharged.*

Conclusions. *This case is very interesting for many factors: A) many extra-uterine fibroids spread throughout abdominal cavity; B) considerable weight of the masses C) intraoperative and postoperative danger. Finally, due to involvement of previous laparoscopic transumbilical incision together with other findings, the hypothesis of post laparoscopic dissemination has to be considered. A case of so large extragenital abdominal fibroids following laparoscopic uterine myomectomy has never been published so far.*

KEY WORDS: Fibroid - Myomectomy - Quality of Life.

Introduction

Fibroid (leiomyoma, myoma, fibromyoma, fibroleiomyoma) is a benign tumor originated from smooth muscular tissue. It is the most common benign tumor of female genital tract and the most frequent soft benign neoplasm of all representing the major indication for hysterectomy. In fact, the majority belongs to uterus. Based on the location regarding uterine walls they may cause several symptoms among which abnormal gynecologic hemorrhage, dismenorrhea, pelvic pain, bloating, painful defecation, back ache, urinary frequency or retention. Besides, when large abdominal masses belonging to uterus, ovary, fallopian tubes or other abdominal organs press on ureters, they might cause hydronephrosis and interfere with renal function. As urinary incontinence is often associated with fibroid mini-sling surgical procedures or the traditional transobturator vaginal tape technique in some case may be performed (1-3). Leiomyomatosis peritonealis disseminata (LPD) is a benign condition, and a very rare disease. It is suspected that this disease originates from a metaplasia of submesothelial multipotent mesenchymal cells. Since female gonadal steroids play an important role in the pathogenesis of LPD, it is generally associated with high levels of exogenous and endogenous female gonadal steroids (4). Leiomyomatosis peritonealis disseminata (LPD) is a specific type leiomyomatosis that is rarely identified properly before surgery (5). Microscopically, in the fibrotic tissue, number of mitoses per high-power fields is usually low, however increased numbers are critical for neoplastic degeneration. Macroscopically, fibroids typically grow

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in a either spherical or nodular shape with a good demarcation from surrounding structure. Huge and multiple mesenteric fibroids (Kg 4,500) are very unusual. In many cases they are exchanged for subserosal fibroids of the womb due to the proximity with uterine walls. When they have a rapid growth, the risk of becoming malignant (sarcoma) must not be underestimated (6, 7). Surgery is challenging to remove abdominal nodes and extemporaneous histological result is critical for a suitable procedure allowing womb preservation. The present case regards surgical removal of multiple mesenteric fibroids (Kg 4,500) owing to abdominal spread of previous laparoscopic uterine myomectomy performed four years before in another Hospital to a 40-year-old female. Written informed consent was obtained from the patient.

Case report

The present study reports a case of a 40-year-old female (gravida 1, para 1) who was admitted to our University-Hospital owing very large masses occupying the whole abdominal cavity. Clinical history of patient reports a laparoscopic removal of uterine fibroids, using the morcellator, performed four years before in another Hospital. The patient reports abdominal pain starting 6 months after laparoscopic procedures. Also she had progressive swelling of the abdomen. Computerized tomography (CT) showed large solid masses occupying the whole abdominal cavity and compressing liver superiorly, bladder and uterus inferiorly; in addition, the intestinal loops were located around the largest one (Figure 1). The above mentioned growths were considered belonging to the uterus (subserous fibroids). Due to contact with the uterus, even US was not diriment for the correct diagnosis of the origin of tumors.

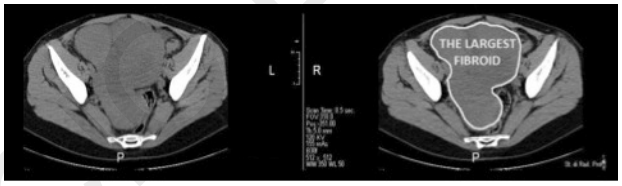

Fig. 1 - CAT: imagine aspect of largest mesenteric fibroid.

Written informed consent was obtained from the patient, who asked preservation of genital apparatus and Pfannenstiel suprapubic transversal incision (PSTI) in the event of benignity. PSTI was carried out. The peritoneal cavity was occupied by solid masses, the hugest of about 25 cm. This largest tumour was taken out with difficulty into anterior external abdominal wall. We realised it was supplied by mesentery; besides, adherences with omentum, bowel and peritoneum were observed. The mass was red in colour and consistent; it was separated from above mentioned surrounding structures and removed (Figure 2). The remained abdominal cavity was full of several centimetric and millimetric fibroids, the most of which spread on mesenteric sheets and on surface of visceral and parietal peritoneum. Additionally a fibrotic retroperitoneal mass (15cm) occupying the right parietocolic space close to the renal loggia and a series of small conglomerated myomata in the site of previous laparoscopic transumbilical route were found. Furthermore a navel hernia was discovered. Uterus was regular in size, however covered by small inflammatory outgrowths and millimetric fibroids which were treated with electro coagulation. Ovaries and fallopian tubes appeared regular. Removal of other fibroids was carried out and they were sent for extemporaneous histological examination together with the largest one (Figure 2).

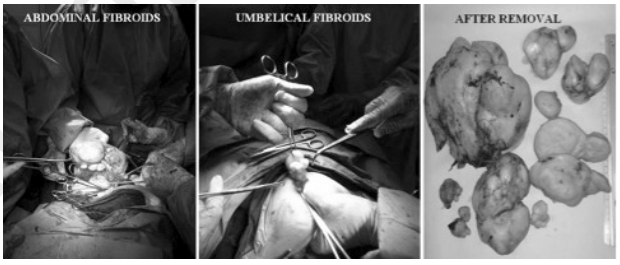

Fig. 2 - Abdominal (on the left) and umbelical (on the centre) fibroids during and after (on the right) surgery.

The result was benign (fibroids) and genital apparatus was preserved. Finally, transumbelical fibroids were extracted through 1 cm umbilical incision and navel hernia was repaired (Figure 2). Surgery was challenging and integrity of ureters was maintained. Bowel was not damaged. Retroperitoneal and intraperitoneal drainages were inserted. Closure of the abdominal wall in layers and intradermic suture ended procedure. The largest fibroid weighed Kg 3.500 and the all tumors removed 4.5 Kg. Post operative course was uneventful and after five days patient was discharged in satisfying clinical conditions.

Discussion

The most interesting points to be considered are the following:

- correct diagnosis;
- suitable treatment;
- correlation cause-effect;
- primary and secondary prevention.

The preoperative diagnosis is based on the various imaging techniques such as CT, magnetic resonance imaging (MRI) and ultrasound. The imaging shows inhomogeneous structures and irregular margins suspicious of malignancy. However instrumental preoperative diagnosis is never certain, but likely. The rapid growth of the nodes is an unfavorable prognostic factor.

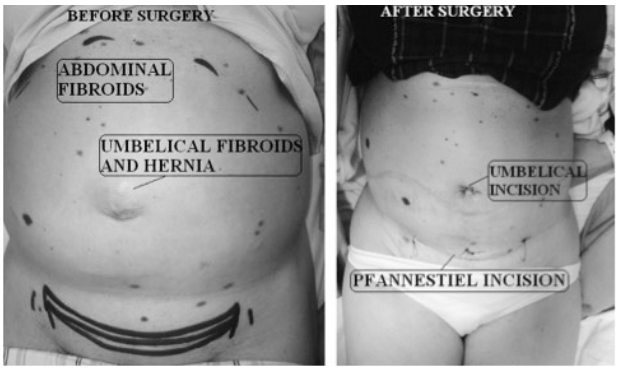

Fig. 3 - Patient before and three days after surgery.

A correct preoperative diagnosis is crucial for an appropriate management of disease. In our case report, the contact of the mass with the perimetrium caused a misdiagnosis of belonging and the voluminous mesenteric mass was mistaken for subserous fibroid of uterus. Only with surgery a certain diagnosis of site is obtained while histological examination makes possible to define accurately either benignity or malignity of structure. In case of large abdominal masses, the most appropriate treatment is surgery. Usually surgery is planned to improve fertility, although it has been reported the procedure can be performed during caesarean section in selected cases (8).

Myomectomy can be performed by laparoscopy, laparotomy, radioembolization, hysteroscopy and vaginal approach. When voluminous solid masses occupy the whole abdomen, open surgery is a correct choice. With respect to modality of incision, the most used are the median longitudinal incision (MLI) and PSTI. The former offers the advantage of allowing a good exposure of the abdominal cavity and makes easier the removal of large masses. It is the most appropriate route for malignancies. Disadvantages are anti-esthetic scar and increased risk of laparocele. The latter (PSTI) is an aesthetic incision well accepted by patient (Figure 3) with low risk of incisional hernia, however offers a less abdominal exposure; it is used for benign tumours of uterus, ovaries and fallopian tubes. In this case report, the choice of patient was decisive for performing PSTI and the extemporaneous result of benign fibroids avoided other enlarging longitudinal incision. Besides a small intraumbelical cut allowed hernia repair in the site of the laparoscopic scar, after removing umbilical nodes (Figure 3). Abdominal fibroids might be primitive or secondary; the former (the most common event) take origin from abdominal extragenital organs; the latter (the most unusual event) occur when an uterine pedunculated fibroid get entirely separated from the uterus and supplied by other organs or when a surgical procedure allows an intra-abdominal spreading of fibroid cells or pieces. Previous pedunculated abdominal myoma involves just a singular node, whereas post laparoscopic abdominal leiomyomatosis represents a disseminated path. Concerning correlation cause-effect of abdominal fibroids with a previous surgery, the presence of fibrotic nodes all over the abdomen and inside the navel in the site of laparoscopic incision is a valid reason for this hypothesis. Minimally invasive gynecological surgeons who perform laparoscopic intraperitoneal myomectomy should consider the US Food and Drug Administration (FDA) warning and litigation regarding the use of morcellator with claims of intraperitoneal cellular spreading, especially when diagnosis of benignity is not sure. On November 24, 2014 the FDA issued a statement warning against using laparoscopic power morcellators for patients undergoing either hysterectomy or myomectomy. Despite this warning, the use of power morcellation devices is not completely abandoned (9). The complete removal of fibroids should avoid the spread caused by some instruments. Although fibroids are benign tumors, their impact on women's quality of life can be considerable (10, 11). Fibroids can be of genetic or hormonal origin or arise from surgical events, causing infertility or sterility (12-15) and their removal improves the clinical condition (16). Current options for medical treatment include control of estradiol and progesterone production. Although curative treatment of fibroids relies on surgical strategies, the current trend is for uterine-sparing treatment to preserve fertility and avoid unnecessary surgery as it is well known that infertility has a negative impact on women's quality of life. The modified concept "infertile woman" is considered differently from the head noun "woman" (17) causing a sort of stigmatization of the person not able to conceive. Feelings of shame are often associated with infertility. The internalization of unworthy or abusing parents (18) may also play a role in causing such emotion together with dysfunctional attitudes (i.e. insecure attachment and problematic internet use) (19, 20) and disadaptive disorders (i.e. psychopathic traits) (21).

Currently approved medical treatments include also GnRH analogues, and, more recently, selective progesterone receptor modulators to reduce fibroid volume (22).

Conclusions

This case is very interesting for many factors: A) many extra-uterine fibroids spread throughout abdominal cavity; B) considerable weight of the masses C) intraoperative and postoperative danger. Finally, due to involvement of previous laparoscopic transumbilical incision together with other finds, the hypothesis of post laparoscopic dissemination has to be considered. A case of so large extragenital abdominal fibroids following laparoscopic uterine myomectomy has never been published so far. Finally, exploring quality of life in women with such health problems is very important (23).

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