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CLINICAL STUDY

Ileus, pregnancy or leiomyoma? A case of a large intraabdominal tumor

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Abstract: *Objective:* Authors evaluate a case of an extremely large leiomyoma, its symptomatology, diagnosis and surgical treatment. They present the possible peroperative complications and emphasize the necessity of the interdisciplinary approach.
Methods: The set of patients consists of 21 patients with leiomyomas of various localizations. All patients were operated by means of conventional operation. The material was sent for classical bioptic examination with the use of immuno-histochemical analysis.
Results: Unlike found in literature, the most common appearance of leiomyoma in our set of patients was on small bowel, namely 10 of 21 patients had tumors in this localization. Furthermore there were three tumors of gynecological origin. Two of them had acute abdominal disease (AAD) while in these cases, ileus was a reason for urgent operations. In all three gynecological cases it was difficult to diagnose preoperatively the origin of tumors. In one patient, the preparation led to partial iatrogenic lesion of left ureter which was subsequently treated with primary suture. The authors describe zero mortality.
Conclusion: Despite the relatively simple diagnosis of leiomyomas, in some cases of extreme size of the tumor combined with its localization in the small pelvis makes it difficult to distinguish it from other mesenchymal tumors. In order eliminate the peroperative complications it is possible to introduce a urethral catheter and to set up a multidisciplinary operation team to achieve combined experience *(Fig. 5, Ref. 14).* Full Text in free PDF *www.bmj.sk.*
Key words: leiomyoma, ileus, surgery treatment.

Leiomyoma is a benign mesenchymal tumor arising from smooth muscle. Most often the surgical practice encounters leiomyomas arising from smooth muscle of digestive canal, referred to as GISTs. They occur on gullet, stomach and small intestine but also on colon and rectum. Relatively frequent are leiomyomas arising from uterus. They occur in 20–40 % of women after their third decade of life. In our work, we want to draw attention to the fact that even this group of leiomyomas can reach an extreme size, which renders fast preoperational differentiation from other mesenchymal tumors arising from retroperitoneum impossible. Although these tumors are mostly treated at gynecological clinics, they can just as well appear at the operating theatres or at urologists. The compression of ambient organs (mostly small intestine and colon, bladder, iliac blood vessels etc.), but often also tumor necrosis and its infection can imitate or be the cause of sudden abdominal event.

Methods

During the period of 2007–2008 there were 21 patients operated at the Surgery Clinic of FH in Presov with the diagnosis of leiomyoma. Three of then were localized on the stomach, one on fauces, ten on small bowel, four on sigma and three arising form uterus. Forasmuch our experience with GISTs therapy had been already published, in our work we concentrated on the evaluation of the latter three leiomyomas of uterus that in the last years occurred at out clinic. One of them reached an extraordinary size of 65x34x30 cm and weight of 24 kg.

All three patients were examined before the operation by USG, CT, alternatively MRI and subdued to an examination by gynecologist. In one case a preoperative punctual biopsy was performed with a result confirming a mesenchymal tumor – v.s. leiomyoma. In other two cases, we did not perform the preoperative punctual biopsy because of the acute state of ileus requiring an immediate surgery. Bioptic samples were commonly stained and subdued to immuno-histochemical examination at the bioptic laboratory at the Faculty Hospital's Department of Clinical Pathology. The operation was performed under total anesthesia by the conventional method from middle laparotomy.

Results

We have already presented our experience with GISTs therapy and retroperitoneal mesenchymal tumor in the past and therefore we limit our focus to the evaluation of rare leiomyomas of uterus in the material of our Surgical Clinic for the given period. There are three cases, of which the first is unusual by its enor-

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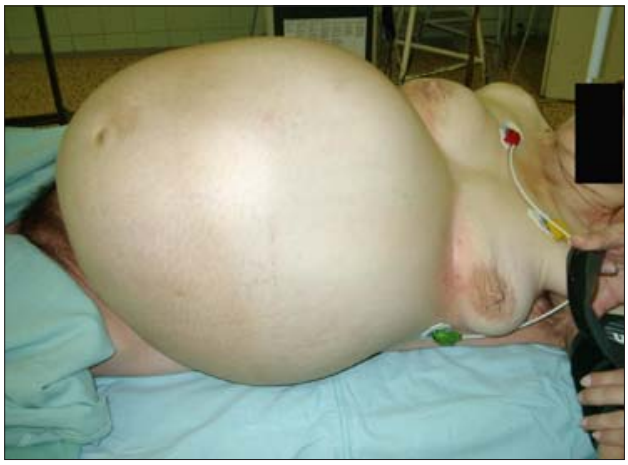

Fig. 1. Intraabdominal tumor of enormous size.

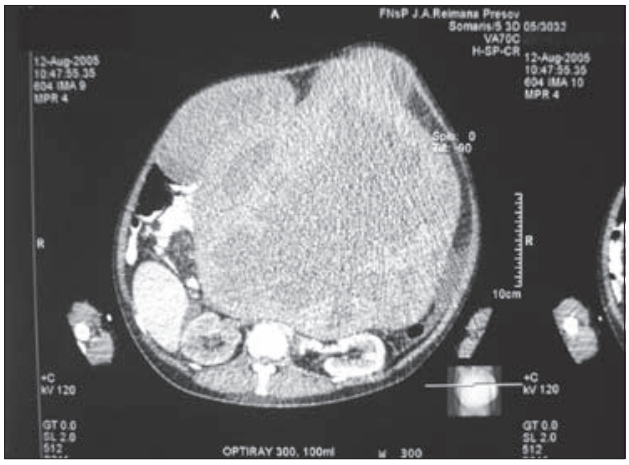

Fig. 2. Computer tomography.

mous size. A 42-year old patient A.M. a multipara (3x) with no other serious illness, nonsmoker, of simplex intellect and elementary education, manual worker, at that time unemployed was sent to our clinic from a catchment hospital with basic laboratory examinations, USG examination and gynecologic examination with the diagnosis of abdominal tumor. The case history contained two years of untreated irregular menstruation cycle with, the past seven months of amenorrhea and no data of metrorrhagia. She complained of a more or less symmetrical edema of low extremities, occasional flatulence. She did not suffer from dysuria or oliguria. The patient thought that the absence of menstruation and the "growing of abdomen" was caused by an advanced state of pregnancy. She had not visited a gynecologist for the whole time before she was hospitalized except once at her place of residence (Fis 1—5).

After she had been taken to our clinic, we did not ascertain any pathology in the blood count and sedimentation. Inflammation markers (CRP) were only slightly increased, corresponding to a light uroinfection. Except for a mild increase in AST and GMT, all values including urea and creatine were within the normal range. Based on clinical palpation diagnosis, we repeated the USG examination and because of defective MR we indicated CT examination that showed an enormous tumor of mesenchymal character, arising from retroperitoneum, compressing ambient structures and causing dilatation of the collecting system of both kidneys, especially of the right one. The enteric loops were dilated in the whole range and pressed up high under the diaphragm and over the liver and stomach. Urologic counseling was completed by intravenous excretory urography and own urologic USG examination. They confirmed the dilatation and stasis in the collecting system mostly on the right at a relatively good morphologic and functional state of renal parenchyma, this time with uroinfection and the diagnosis of E. coli and Enterococcus faecalis in urine.

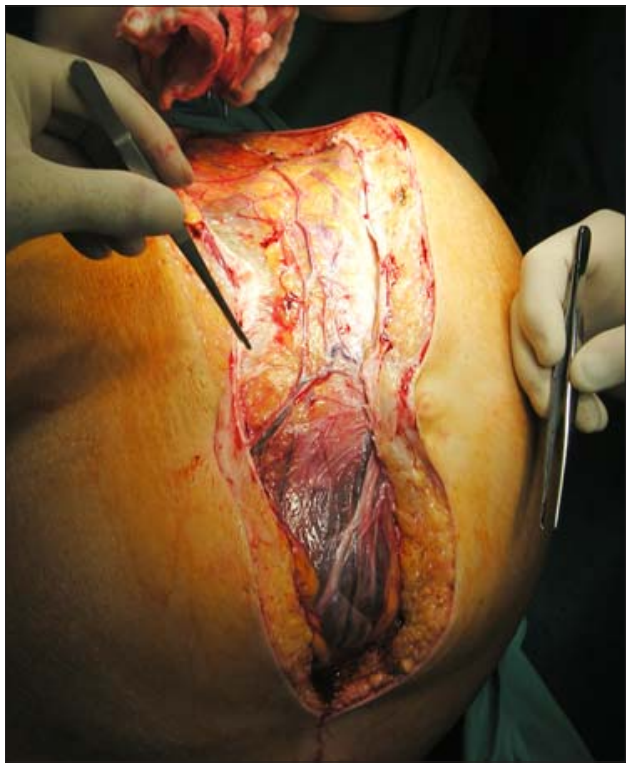

Fig. 3. Approach by middle laparotomy from xiphod to symphysis.

Following the CT, which had described the tumor as arising from retroperitoneum but not did not exclude explicitly the gynecologic origin, the gynecologic examination was performed. We have performed also preoperative punctual biopsy because the tumor with its size and stable character urged upon the front abdominal wall which allowed to perform it without any risk of injuring the hollow organs. With regard to the enormous range of the process and adjacent relation to rectosigma and iliac vessels, the patient was laparotomized at the surgery workplace at presence of multidisciplinary composed operation team. The operation consisted of radical extirpation of the whole tumor, of total hysterectomy and taking of more samples of bioptic material for peroperative biopsy – with the diagnostic conclusion of benign leiomyoma. In other two cases of uterine leiomyomas

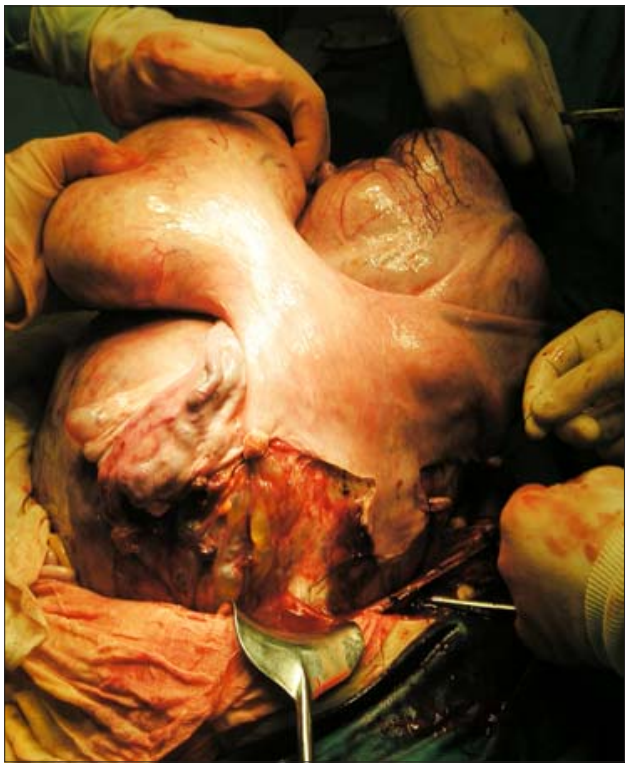

Fig. 4. Tumor extirpation.

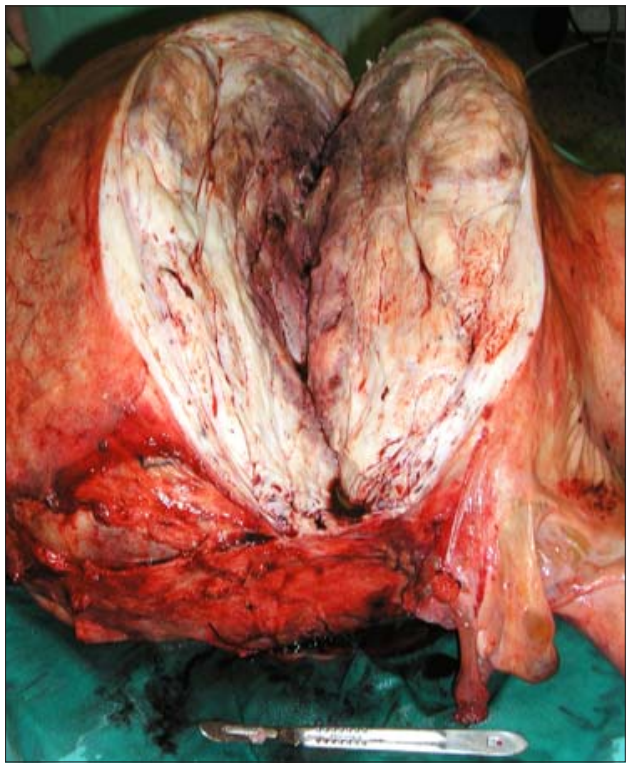

Fig. 5. Preparative on section with leiomyoma structure.

there were very similar circumstances at our workplace, but in both cases the tumors were of substantially smaller size, arising from the back side of uterus, compressing the rectosigmoideum and resulting in chronically progressing state of ileus. Both patients were admitted at emergency service and operated urgently in compliance with valid regulations for solving AAD. Deliberative rectosigmoideum without its resection was performed and gynecologists performed supravaginal hysterectomy. In all cases, the healing took place per primam and so far the patients have been without clinical complications and recurrence.

Discussion

In gynecologic literature, the references to the occurrence of uterine leiomyoma are not frequent (1, 2, 3, 4).

Apart form GISTs and extraabdominal localization of leiomyoma, in recent surgical literature we have found only one quotation related to the diagnosis of uterine leiomyoma. This is obviously an effect of technical advancement and better diagnostic possibilities of using the CT and MR compared with the past when the frequency of this disease also at surgical workplaces was relatively high. Based on our experience we suggest that in case of extreme giant size and bizarre shapes of tumor, even the up-to-date methods of examination do not give an exact answer as to the origin of tumor.

The consideration to present this gynecologic problem was a rare extreme giant uterine leiomyoma of 64 x 34 x 30 cm in size and 24 kg in weight, which we have solved at our clinic. This "our" tumor is expressly the biggest of all cases described in available literature. A reference about a similar tumor was published only by authors from a clinic in Barcelona listed in the registry of quotations under No. 2 (2).

With regard to the topographic and anatomic properties of tumors closely related to rectosigmoideum, terminal ileum, ureter and iliac vessels also the gynecological studies describe surgical complications (5, 6, 7). A frequent complication is that of enteric ileus, but many other surgical complications are described (8, 9, 10). Even from our study with statistically insignificant numbers of operations performed at our workplace, it is evident that in two of three operations, ileus-derived AAD was present. In one case, the peroperative preparation led to a partial lesion of left ureter, which was subsequently treated by primary suture and assuring the hem system of right kidney onto oelvis introduced into transurethral catheter.

This is the second impulse to publish our experience with an aim to advise on possible surgical complications of this disease with a possibility of incurring peroperative lesions to digestive canal, ureter or iliac vessels. It is evident that this problem requires an interdisciplinary approach (6, 9, 11).

The therapy of uterus depends on the phase, size, localization of tumor, and age of patient. It can be hormone-based at its earlier phase. Transvaginal surgical solution can be used for smaller tumors with submucosal localization, Laparoscopic approach is appropriate with smaller tumors while in classic "open" laparotomic operation, the range, localization and possibilities of workplace must be considered (12, 13).

Our patients were treated with an antibiotic prophylaxis of second generation of cephalosporins (Zinacef) starting 1 – 2 hours before the operation and lasting for 24 hours. With regard to the localization in the small pelvis, often with compression of iliac vessels it is necessary to prevent the thromboembolic disease by means of low-molecular-weight heparin (14). Under our conditions, the patient with the extremely large tumor, swellings of both low extremities, evident marks of venous stasis in the venous system of low extremities was given a subcutaneous dose of 0.3 units of LWMH – Fraxiparin already two hours before the operation. The heparinisation by low-molecular-weight heparin continued up to the 6th day after the operation. After consultation with hematologist, we applied low amounts of coumarin. Each of our two patients who were admitted urgently with the symptoms of ileus was given also 0.3 units of Fraxiparin two hours before the operation and after 5 – 7 days, in an amount of 0.3 units s.c. daily. In all cases, the surgical course was without complications.

Conclusion

Based on our experience with a small group of uterine leiomyomas causing surgical symptoms solved at our surgical clinic it is not our aim to present recommendations as to the therapy of this disease. It is our aim to present a rare case of an extremely giant leiomyoma, arising from uterus and indicate that despite the current diagnostic possibilities it is sometimes difficult to distinguish it preoperatively from retroperitoneal leiomyosarcoma or other mesenchymal tumors of retroperitoneum. In this way, a case of uterine leiomyoma can appear also at surgical theaters. This is the reason why we consider important to indicate that the surgeons should be prepared to solve also this type of situations in respect of tumors and surgical complications frequently arising as a result. At the same time we emphasize a close interdisciplinary cooperation of surgeons, gynecologists and urologists.

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