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Spontaneous Vaginal Expulsion of the Uterine Myomas - Vaginal Expulsion of Myomas

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Abstract

Spontaneous vaginal expulsion is a really rare condition which without proper treatment may cause many life-threatening complications. Therefore, we present the case of a young woman who was admitted to a gynecological ward because of the heavy menstrual bleeding, abdominal pain since 3 weeks, anemia and fever.

The patient did not reveal any medical history. During the hospitalization spontaneous, vaginal expulsions of a purple-grey, stinking tissue were observed. Because of the unclear symptomatology and imprecise results of ultrasound scans, she was subjected to a detailed examination. The spontaneous, unusual vaginal expulsion of the uterine myomas was diagnosed.

According to authors knowledge it is the first case study in unusually young women, which shows spontaneous expulsion of myomas without known reason. By this study, authors want to increase awareness of this disease process, present multiple diagnostic dilemmas which can delay diagnosis and show different ways of treatment.

Keywords: Abdominal pain; Myoma; Uterus; Vaginal discharge; Pyomyoma

Introduction

Myomas are benign tumors of the reproductive organ that originate in the smooth muscles of the uterine wall. The incidence is approximately 40% of Caucasian women by age 35 and almost 70% by age 50 [1]. Although histopathologically benign, myomas are associated with increased morbidity due to abdominal pain, metrorrhagia, adjacent organ pressure or infertility [2].

Because of many complications caused by myomas it seems necessary to remove them when they give symptoms. Major modalities of the treatment include pharmacotherapy, embolisation and surgery. Very interesting, but still unknown way of removing myomas from the uterine cavity is their total vaginal expulsion. Till now, there are only few articles available which present cases of sloughing off myomas.

However, in all cases causative factor is presented [3,4]. By this study authors want to document an extremely rare case of a young woman with a spontaneous vaginal expulsion of the myomas.

Case Report

A 22-year-old woman was admitted to our department because of an intense, prolonged menstrual bleeding, lower abdominal pain lasting 3 weeks, anemia and low- grade fever. The patient had no history of chronic diseases, however during her last 4 menstrual cycles she was complaining of heavy menstrual bleeding with clots.

She had never taken any medicaments, had never used contraception and was not sexually active. Pregnancy test was negative. She had never had any surgeries. Clinical examination during the admission revealed the enlarged uterus, a little bit painful during the palpation and mild bleeding from the vagina.

The blood tests showed the mild anemia (9.3 g/dl) and the increase of C-reactive protein level (10.31 mg/l) with the normal white blood cell count (8.4×10^{-3}/uL) – ciprofloxacin with metronidazole were administered to limit the infection and oral iron therapy to compensate anemia.

The tumor markers (carcinoembryonic antigen, carbohydrate antigen 19-9, cancer antigen 125) were negative. An ultrasound revealed a big uterus (110 × 120 mm) with two heterogenous masses – intramuscular (92 × 100 mm) and supracervical (diameter 37 mm), which could suggest myomas **(Figure 1).**

Because of the diagnosis uterine myomas, long lasting pain and bleeding the surgery was arranged to remove myomas. However, few days after a purple-grey, flaccid, stinking tissue, which did not resemble a myoma, were excreted from the vagina, which postponed the planned surgery to broaden diagnosis.

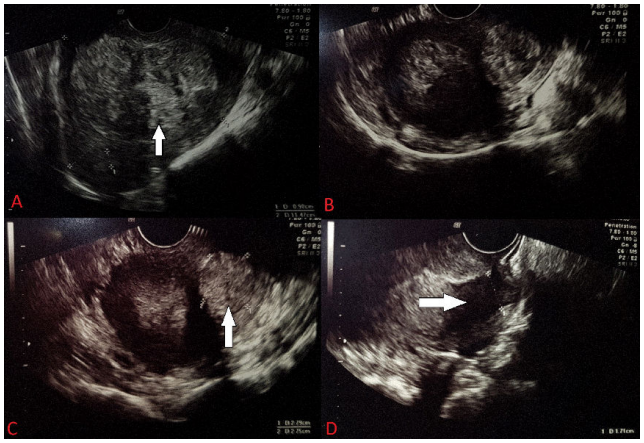

Figure 1 Pelvic sonograms (A) A big heterogenous myoma in the body of the uterus (arrow), (B) The enlarged uterus with two heterogenous masses – intramuscular (white arrow) and supracervical (black arrow), (C) Supracervical myoma with the diameter approximately 3 cm (arrow), (D) Opened cervical canal (arrow).

The tissues were crumbling, floppy, supple, without any pedicle and were forwarded to the histopathological examination. The vaginal swab was taken that day. Subsequently during the next few days multiple, spontaneous expulsions of necrotic, flabby, stinking tissue were observed. The volume of expelled, crumbling tissues was different every day, from several to several dozen cubic millimeters. The ultrasound scanning done two weeks after admission showed respectively disappearance of the small supracervical myoma and the size reduction of the intramuscular myoma. Four weeks from the admission the dimensions of the intramuscular myoma were reduced to 75 × 70 mm. Although the vaginal tissue did not resemble macroscopically a myoma (especially the prolapsed myoma) the histopathological image of the specimens confirmed the myoma's tissue with purulent effusion and multiple colonies of bacteria **(Figure 2).**

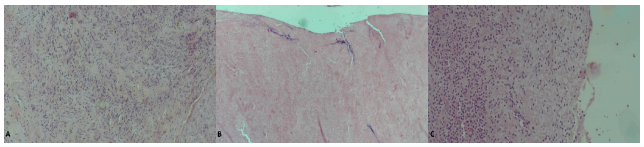

Figure 2 Hematoxylin and eosin-stained section of the leiomyoma shows, (A) necrosis in the leiomyoma without malignant change, (B) gangrenous necrosis with bacteria, (C) necrosis and purulent infiltration.

After the breeding of bacteria also the microbiological cultures from the vagina were positive for *Escherichia coli* and a broad-spectrum antibiotic (cefuroxim) according to antibiogram was administered to treat the infection. Despite of the visible reduction of the myoma's size the patient was still symptomatic with persistent abnormal vaginal discharge, continuous bleeding and abdominal pain. When the hemoglobin level was 7.8 g/dl the patient received transfusion of a group-specific blood. Although the patient was histopathologically diagnosed with myomas, the symptomatology was still unclear and continuous, abnormal vaginal discharge which did not approximate to prolapsed uterine myoma (crumbling tissues) was observed. A magnetic resonance imaging (MRI) was done to complete pre-operative diagnosis. It showed the myoma (42 × 43 × 47 mm) in the anterior wall of the uterus protruding into its cavity **(Figure 3).**

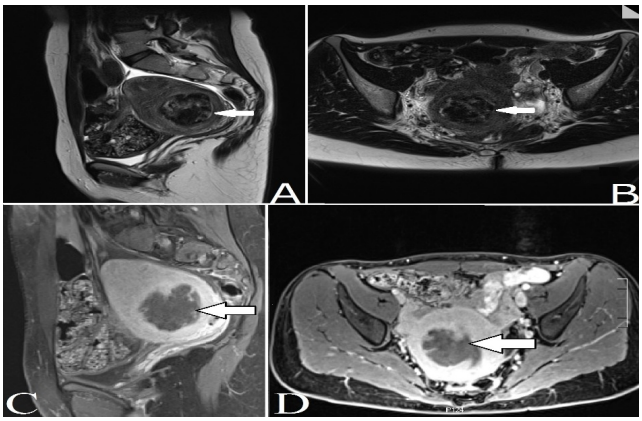

Figure 3 Correlative MRI scans one month after admission to the hospital. Myoma (arrows) inside the uterine cavity. Magnetic resonance T2 weighted images in sagittal (A) and transverse (B) cross sections.

After a contrast injection the signal of the uterus was strengthened and the myoma was with low signal. Based on the clinical presentation, imaging examinations and the histopathological results the diagnosis of a self-expulsion of the intrauterus myomas was finally made. To accelerate expulsion of the myoma methyloergometrin was administered additionally to applied treatment. The surgery was once more postponed.

After 7 weeks of observation with the above-mentioned treatment, the vaginal discharge, bleeding and abdominal pain were absent, the temperature and C-reactive protein level normalized. The ultrasound showed only small intramuscular myoma (28 mm), no surgery was needed.

The follow-up ultrasound after 4 months was unremarkable with no pathological lesions in the uterus.

Discussion

A spontaneous vaginal expulsion of the uterine myomas is an extraordinary phenomenon, especially considering young women. The cause of self-expulsion is not well-known. One of the theories suggests that ischemia followed by necrosis of a myoma is a principal cause of the dead tissue expulsion. However, necrosis generally occurs in postmnopausal women because of systemic vascular insufficiency. Other reasons of necrosis with vaginal expulsion might be connected with drugs administration, intra uterine device, abortion, cesarean section or uterine artery embolization. Our patient denied all these

factors, so probably immunodeficiency should be considered, as the reason of expulsion [5,6].

The beginning of the removal process is non-characteristic as well as symptoms presented by patients. Mostly abdominal pain, fever, vaginal bleeding and elevated inflammatory markers are present. All these symptoms may suggest both benign or malignant process of the abdominal cavity. Among others, gynecologic tumors, tubo-ovarian abscess, septic abortion, pyometra, sarcoma or even gastrointestinal stromal tumor and mucocele of the appendix should be considered [7]. Firstly, the differentiation between pedunculated submucosal myoma should be considered. Although some women with prolapsed uterine fibroid are symptomless, in most cases vaginal bleeding, discharge, or pelvic pain are present, as in our patient. All prolapsed myomas require surgical intervention. It might be vaginal or abdominal myomectomy because pedunculated fibroids dilate the cervix and can stuck there or in the vagina. [4,8]. In contrast with pedunculated submucosal myomas, removal of myomas by self-expulsion is totally different, long lasting process, because tissues of myoma are excreted in small pieces (after necrosis and decomposition of myoma).

Self-expulsion of myoma might be potentially mortality condition due to the delay in diagnostic process and implementation of treatment. If fragments of degenerated myoma become trapped in the uterine cavity or the evacuation process is slow, the necrotic tissue can become infected with the resultant development of pyomyoma. To prevent potential sepsis, it is recommended to administered smooth muscle constrictors to accelerate expulsion and broad-spectrum antibiotics. Sometimes small surgical intervention like an evacuation of the necrotic tissue from the cervix might be needed. Also, daily control of the body temperature and inflammation indicators are necessary to prevent some major complications. According to the literature the mortality from pyomyomas remains high because of concomitant sepsis [5].

Considering this, the MRI scan should be planned at the beginning of diagnostic process since ultrasonographic findings might be nonspecific. In our case the MRI (both with histopathological examination) finally confirmed the benign character of remaining myoma. The MRI T2 weighted sequences did not show the enhancement in the myoma after contrast agent administration, which confirmed the lack of blood supply in the myoma. In sequence, it suggested that the myoma's tissue were necrotic and could be expelled in small pieces. MRI is also good diagnostic exam to confirm or exclude pyomyomas. Air bubbles seen in the MRI highly suggest the infection and abscess formation inside the myoma, which requires intensification of treatment [8]. It is always the matter of debate whether proceed with hysterectomy or myomectomy because of high risk of sepsis. In our patient the MRI did not show air however histopathological exam showed fragments of myoma with purulent effusion and colonies of bacteria. The decision about the surgery was postpone because of the unclear process and mild deviations in laboratory results accepted by gynecological team. However, the patient stayed in the hospital and the level of expulsion of the myoma was checked by ultrasound examination.

Above mentioned process of expulsion of necrotic myoma's tissue is similar to the sloughing off myomas after embolisation, where MRI images are almost identical to presented above [9,10]. Also, symptoms presented by our patient (abdominal pain, fever, increase of CRP level) may suggest 'post-embolisation syndrome', which is an acute reaction for ischemia of myoma. It occurs within 72-hours after embolisation and then subside. In such situation the therapy with pain killers and broad-spectrum antibiotics is necessary, like in our patient. Also trigger factors, for example medicaments or previous uterine interventions, should be considered to prevent a recurrence of symptoms [11].

Conclusion

To sum up, the whole process of the expulsion described in the study might bring to mind the sloughing off process of myomas after embolisation. Ischemia of the myoma, protrusion to the uterine cavity and vaginal expulsion are similar steps of the cascade [6]. If no complications are present the only treatment are antibiotics. Furthermore, we would like to highlight the difficulties during the diagnostic process and the necessity of quick diagnosis using MRI. Although, the study presents the case of healthy, young woman it is also necessary to remember that life-threatening complications may occur during the treatment process. The decision about rapid surgical intervention should be consider on clinical condition of patient as well as her desire for fertility.

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