ISSN 2689-8268 | Volume 4

American Journal of Surgery and Clinical Case Reports

Case Report Open Access

Uterine Lipoleiomyoma Misdiagnosed as Uterine Fibroids of a Pregnant Woman: A Case Report and Literature Review

Yunyun Wang[1], Liping Li[1], Wei Fan[1], Rongfang Zheng[1], Xuefen Fan[1] and Yuzhen Guo[1*]

[1]Department of Gynecology, The Second Hospital of Lanzhou University, Lanzhou, Gansu, China

[*]Corresponding author:

Yuzhen Guo,
Department of Gynecology, The Second Hospital of Lanzhou University, Lanzhou, Gansu, China,
Tel:18109423848, Fax:(+0931)5190590,
E-mail address: guoyz@lzu.edu.cn

Received: 05 Apr 2022
Accepted: 21 Apr 2022
Published: 27 Apr 2022
J Short Name: AJSCCR

Citation:

Yuzhen Guo. Uterine Lipoleiomyoma Misdiagnosed as Uterine Fibroids of a Pregnant Woman: A Case Report and Literature Review. Ame J Surg Clin Case Rep. 2022; 4(12): 1-4

Keywords:

Case report; Histopathology; Pregnancy; Uterine fibroids; Uterine lipoleiomyoma

1. Abstract

Uterine lipoleiomyoma is relatively rare in the clinic, particularly pregnancy with uterine lipoleimyoma which only one case has been reported in the literature. Therefore, misdiagnosis of uterine lipoleiomyoma as other gynecological diseases is highly likely, especially in the pregnancy state. Here we report a case of a 38-year-old female admitted with complaints of intermittent lower abdominal pain discomfort for 10 days. Based on the clinical manifestations, laboratory and imaging examinations, she was diagnosed as pregnant with uterine fibroid with fatty degeneration prior to operation. She had undergone the laparoscopic myomectomy after abortion for 50 days. However, uterine lipoleiomyoma was confirmed based on the postoperative features and immunohistochemical results. This patient was discharged home in good general condition with regular follow-up. According to summarize the key points of this misdiagnosed case, we can know that the uterine lipoleiomyoma is a rare benign tumor with no specific clinical symptoms. It is a challenge to make a definite diagnosis before surgery and needs to be confirmed by immunohistochemistry assay along with histopathological examination. The clinical characteristics and treatment methods of pregnancy with uterine lipoleiomyoma and its obstetric outcomes are similar to those of pregnancy with uterine fibroids. However, whether there are differences among the same aspects remains to be clarified by a large number of clinical data.

2. Introduction

Lipoleiomyoma is a rare benign tumor, composed of mature adipocytes and smooth muscle cells [1]. The uterine lipoleiomyoma is an even rarer benign tumor with an incidence of 0.03%-0.20% [2], commonly occurring in menopausal and postmenopausal women accompanied by obesity, hypertension, gallbladder diseases, diabetes, and thyroid disorders [3]. Herein, we report a confirmed case and review the relevant literature to advance our understanding of this disease.

3. Case Presentation

A 38-year-old married female was at childbearing age with regular menstruation and her last menstrual period (LMP) was normal with the same menstrual amount and blood color observed. The patient went to the local hospital because of intermittent lower abdominal pain discomfort for 10 days after minor vaginal bleeding for 1 day coincided with the menstrual date. The local hospital did some effective exams for her. The urinary human chorionic gonadotropin (HCG) indicated positive for pregnancy. The Magnetic Resonance Imaging (MRI) showed a space-occupying lesion on the left side of the pelvic cavity with the size of 9.3x7.8x6.7cm, and the initial diagnosis was teratoma. The patient was referred to the superior hospital for further diagnosis and treatments, so the patient was admitted to our hospital after 42 days of menopause. After admission to our hospital, the patent was in general good condition. The gynecologic examination revealed uterine enlargements as a result of over three months of pregnancy, soft texture, and no tenderness. We further conducted laboratory tests and imaging examinations. Laboratory tests showed serum concentrations of HCG (8751.00 mIU/ml, normal range: 0.00-30.00 mIU/ml), progesterone (8.45 ng/ml, normal range: 0.15-1.40 ng/ml) and Carbohydrate Antigen 125 (823.00 U/ml, normal range: 0.00-35.00 U/ml), while other tumor markers level remained in the normal range. The gynecological ultrasound showed two abnormalities: 1) a gestational sac in the uterine cavity with a yolk sac was observed, but without embryo tissue, and without liquid dark area around the gestational

sac; 2) a hyperechoic lesion with a size of 7.7x5.8 cm had a regular shape and clear boundary. However, the internal echo of the lesion was heterogenic and the blood flow signal was found in the peripheral locations. Therefore, early intrauterine pregnancy and uterine fibroid with fatty degeneration were considered based on the clinical manifestations, laboratory tests and ultrasound images, and consequently the patient was initially diagnosed as pregnant with uterine fibroid with fatty degeneration. Because she already has three children, the abortion was performed on the third day of admission upon the patient's request. The patient was discharged from the hospital after 5 hospitalized days and was recommended to return within 2 weeks to the hospital for further treatments. The patient re-attended our hospital after discharged for 45 days. The re-examination of gynecological ultrasound showed a hyperechoic lesion in the posterior wall of the uterus, and fibroid with fatty degeneration was mostly considered. Laboratory examinations did not show any significant abnormalities. Based on the examinations, the preliminary diagnosis of uterine fibroid with fatty degeneration was considered, and the laparoscopic myomectomy was implemented on the third day of admission. The gross specimen revealed a pile of 10x8x4cm grey-white non-reshaping tissue. The histopathological characteristics of the samples (Figure. 1) were compatible with lipoleiomyoma combing with immunohistochemical staining, and the immunohistochemical staining identified as follows: ER(+), PR(+), desmin(+), h-caldesmon(+), S100(-), ß-catenin(+), MDM2(-), CDK4(-), HMB45(-), MelanA(-), CD117(-), CD34(-), Dog-1(-), Ki67 positive cells 1%. The patient was discharged from our hospital on the eighth day after the operation and a systematic follow-up after discharge from the hospital was strongly recommended.

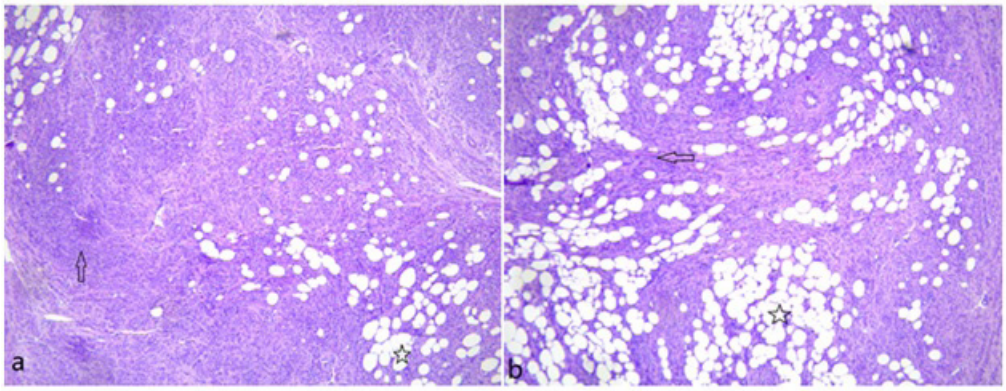

Figure 1: Histopathological examination of the uterine lipoleiomyoma: mature adipocytes (stars) together with smooth muscle cells (arrows). (a: hematoxylin and eosin, 40x; b: hematoxylin and eosin, 100x).

4. Disscussion and Conclusions

4.1. Uterine Lipoleiomyoma

Fatty tumor of the uterus is a very uncommon solid tumor, can be divided into three types: 1) simple lipoma which is composed of the mature adipocytes; 2) mixed with a variety of mesoderm component lipoma, which can be further divided into lipoleiomyoma, angiolipoleiomyomas, and fibro lipoma; 3) malignant liposarcoma. The simple lipoma is rare, and the malignant liposarcoma is even rarer [4]. The current case is a mixed type. Uterine lipoleiomyoma is a rare and easily misdiagnosed benign uterine tumor. It usually occurs in perimenopausal and postmenopausal women [4]. Most of the patients with uterine lipoleiomyoma have no obvious clinical symptoms, or present with symptoms similar to uterine fibroids, such as menstrual disorders, abdominal mass, abdominal pain, urinary frequency, and urinary incontinence [3]. The pathogenesis of uterine lipoleiomyoma is still unclear, particularly regarding the adipose tissue origin as the normal uterus has no adipose tissue. It is difficult for us to make a definite diagnosis before the laparotomy. Ultrasound is preferred for gynecological diseases and most of the manifestations of uterine lipoleiomyoma in ultrasound are clearly defined as hyperechoic lesions with hypoechoic edges around [5]. Computed Tomography (CT) scans may show localized or diffused fat density with solid components interlaced, and CT enhanced scans may show slight enhancement of the solid components of the lesions, but no enhancement of the fat density [6]. MRI is the essential imaging examination in the diagnosis of uterine lipoleiomyoma(7), in which fat tissue shows high signal T1/T2 as well as a signal loss on Diffusion-Weighted Imaging (DWI). Furthermore, MRI is also useful to distinguish simple lipoma from lipoleiomyoma [7]. The confirmed diagnosis requires histopathology and immunohistochemistry. In the histopathologic sections, the lesions are mainly composed of mature adipocytes and smooth muscle cells in different proportions, and the mature adipocytes show the focal or diffuse distribution in the tumor without heterogeneity [1]. Immunohistochemical features of lipoleiomyoma include positive desmin protein and Smooth Muscle Actin (SMA) in smooth muscle cells, positive S100 protein in adipocytes, positive Vimentin, positive ER, and PR in some cells, the Ki67 positive cell number＜1% [6,8]. Additionally, uterine lipoleiomyoma is easy to be misdiagnosed with other diseases, of these, the most easily diagnosed member is uterine fibroids fat degeneration: uterine fibroids fat degeneration is a rare type of uterine fibroids degeneration, which mostly occurs in the late of transparent degeneration or after necrosis, and tends to occur

in perimenopausal and postmenopausal women. It is very similar to uterine lipoleiomyoma in the clinical characteristics, and easily be misdiagnosed by preoperative ultrasound. In MRI, the signals inside lesions are mixed when uterine fibroids fat degeneration occurs, often along with other degenerations e.g. cystic degeneration and calcification. However, the lipoleiomyoma has no degeneration manifestations [8]. Uterine fibroids fat degeneration on the histopathological section is manifested as smooth muscle cells containing lipid droplets instead of fat cells, and the fatty component in lipoleiomyoma is real fat cells. Uterine lipoleiomyoma belongs to the benign tumor with the similar treatments as uterine fibroids. The asymptomatic patients for perimenopausal and postmenopausal can only be detected by follow-up observation. Those with symptoms or without follow-up conditions should be considered to perform the surgical treatment. The treatment strategies are selected based on age, fertility requirements, and the severity of symptoms [3].

4.2. Pregnancy with Uterine Lipoleiomyoma

Only one case of pregnancy with uterine lipoleiomyoma has been reported by reviewing the literature [9], and the lesion of this case is principally located in the anterior lip of the cervix. In addition, whether the patient has been reported in the past, or the patient that we discuss in this article, those two women are illiterate, belong to the low socioeconomic group, have not received antenatal care throughout the pregnancy, and have no specific clinical symptoms. All this has provided a difficult context for our diagnosis and treatment. Combining with the clinical characteristics of these two cases, we will preliminarily discuss the clinical symptoms of the disease as well as the key points in diagnosis and treatments. Since the patients with uterine lipoleiomyoma commonly present similar symptoms to uterine fibroids [3], in addition, the patient of our case has clinical characteristics similar to pregnancy with uterine fibroids, such as a small amount of vaginal bleeding in 30 days after the last menstrual period before pregnancy, accompanied by lower abdominal pain discomfort, it is speculated that the clinical symptoms of pregnancy with uterine lipoleiomyoma may be similar to those of pregnancy with uterine fibroids. The influence of uterine fibroids on different stages of pregnancy depends on the size, location, number, and degeneration of lesions [10]. Women with uterine fibroids during pregnancy have an increased risk of developing all kinds of uterine fibroids degeneration, such as hyaline degeneration, cystic degeneration, and so on. However, pregnant women with degeneration gradually have no clinical symptoms, and the effects of pregnant women with degeneration are not as serious as those with pure pregnancy. For pregnancy with uterine fibroids red degeneration, the most common one of the abdominal symptoms, the typical symptoms include different degrees of constant local abdominal pain, or occasional acute abdominal pain, accompanied by fever and clinical symptoms such as nausea and vomiting [11]. Although fibroids generally have no special performance during the pregnancy, it can lead to obstetric complications such as early abortion, abdominal pain because of red degeneration, premature delivery, premature rupture of membranes, fetal abnormalities, intrapartum and postpartum hemorrhage, and uterine torsion [12]. In the early weeks of pregnancy, the presence of fibroids is detrimental for implantation of a fertilized egg, as the study shows [13] that the rate of miscarriage or premature birth is 20-30%, which is 2-3 times higher than those without fibroids. Therefore, we speculate uterine lipoleiomyoma also can lead to some adverse obstetric outcomes. However, whether lipoleiomyom increases the risk of adverse obstetric outcomes like uterine fibroids requires further study. Since the combination of pregnancy with uterine fibroids may lead to a series of adverse obstetric outcomes, it is important to select the appropriate diagnosis and treatment strategies. Currently, the treatment methods mainly include conservative treatment and surgical treatment, but there is still no consensus on the specific methods for a certain stage of pregnancy. The general treatment principle of pregnancy with uterine fibroids should be based on the pregnancy month, fibroid size, clinical symptoms, growth site, and the needs of patients [12]. Generally speaking, conservative treatment is the first choice. Whether pregnancy with uterine fibroids or post-pregnancy detection of fibroids, pregnancy care should be done. Asymptomatic and small uterine fibroids in early pregnancy generally do not need to be treated, to have a regular birth examination for observing the size changes of uterine fibroid during pregnancy. Those with symptoms of threatened abortion need bed rest, with strengthened nutrition and no sexual life. They can be given appropriate drugs to protect the fetus. If the symptoms improve in the short term, continuing pregnancy can be considered. Otherwise, the repeat occurrence of inevitable abortion or recurrent abortion may increase obstetric complications. Nevertheless, it is recommended to immediately terminate the pregnancy after myomectomy. If the fibroid is very large and it is predicted the influence of pregnancy is serious, or the patient does not want to continue the pregnancy and requests for an abortion, abortion should be taken into consideration, followed by myomectomy [14,15]. The symptoms of the patient admitted to our hospital should be strictly distinguished from normal menstrual dysmenorrhea, abortion, and ectopic pregnancy. Her gynecological ultrasound confirmed intrauterine pregnancy, indicating the threatened abortion. For example, she has symptoms of threatened abortion during the early weeks of pregnancy, the large lesion located between the muscular wall, and she requests an abortion, hence we performed the laparoscopic myomectomy after the abortion operation for 45 days. It is well-aligned with the treatment principles. However, it is undeniable that there are many deficiencies in the process of diagnosis and treatments for the patient admitted to our hospital by sorting subsequent data and reading literature. Firstly, the patient did not have a routine physical examination before this admission, and thus we did not know the occurrence time and the

growth rate of the lesion. Its atypical clinical symptoms with vaginal bleeding and lower abdominal pain after menopause for 30 days caused the problem of inaccurate diagnosis. Moreover, it was unlikely to determine the relationship between the development of abortion and uterine lipoleiomyoma at this stage. Secondly, the preoperative examination of the patients was not sufficient. MRI was given in the local hospital at the first admission, but we only carried out gynecological ultrasound without further examination of CT and MRI, leading to misdiagnosis. Finally, the patient lost the possibility of continuing to keep the pregnancy, and therefore it was impossible to observe the developments and changes of uterine lipoleiomyoma in the whole process of pregnancy and the impact of uterine lipoleiomyoma on the pregnancy outcomes. In conclusion, uterine lipoleiomyoma is a rare benign tumor and it should be differentially diagnosed from other gynecological diseases before operation, the correct diagnose requires combing the clinical data, pathological features and immunohistochemical results. Pregnancy with uterine lipoleiomyoma is similar to pregnancy with uterine fibroids in clinical manifestations and treatments, but a greater number of cases are needed to determine the most adequate and appropriate treatment. We report this rare case to remind everyone that all aspects must be considered for pregnancy-related complications, the correct diagnosis can be used to formulate an appropriate treatment. Doctors must be highly alert to the disease and accumulate experiences of its diagnosis and treatments to explore the best treatment plan for the patients.

References

1. Ghosh B, McKeown B, Gumma A. Lipoleiomyoma. BMJ case reports. 2011.
2. Mignogna C, Di Spiezio Sardo A. A case of pure uterine lipoma: immunohistochemical and ultrastructural focus. Archives of gynecology and obstetrics. Dec 2009; 280(6): 1071-1074.
3. Nazir HM, Mehta S, Seena CR. Uterine Lipoleiomyoma: A Report of Two Cases. Journal of clinical imaging science. 2017; 7: 26.
4. Nayal B, Somal PK, Rao AC. Uterine lipoleiomyoma: A case report of a rare entity. International journal of applied & basic medical research. Apr-Jun. 2016; 6(2): 134-136.
5. Tyagi N, Tyagi R, Griffin Y. Uterine lipoleiomyoma. BMJ case reports. 2014.
6. Johari B, Koshy M, Sidek S. Lipoleiomyoma: a rare benign tumour of the uterus. BMJ case reports. 2014.
7. Chu CY, Tang YK, Chan TS. Diagnostic challenge of lipomatous uterine tumors in three patients. World journal of radiology. 2012; 4(2): 58-62.
8. Akbulut M, Gündoğan M, Yörükoğlu A. Clinical and pathological features of lipoleiomyoma of the uterine corpus: a review of 76 cases. Balkan medical journal. 2014; 31(3): 224-229.
9. Manila K, Laxmi M, Ranjana P. Cervical Myolipoma with Pregnancy: Report of a Case and Brief Review of Literature %J Nepal Journal of Obstetrics and Gynaecology. 2009; 4(2).
10. Chill HH, Karavani G, Rachmani T. Growth pattern of uterine leiomyoma along pregnancy. BMC women's health. 2019; 19(1): 100.
11. Dohbit JS, Meka ENU, Tochie JN. Diagnostic ambiguity of aseptic necrobiosis of a uterine fibroid in a term pregnancy: a case report. BMC pregnancy and childbirth. 2019; 19(1): 9.
12. Saleh HS, Mowafy HE, Hameid A. Does Uterine Fibroid Adversely Affect Obstetric Outcome of Pregnancy? BioMed research international. 2018; 8367068.
13. Mitić G, Kovac M, Povazan L. Efficacy and safety of nadroparin and unfractionated heparin for the treatment of venous thromboembolism during pregnancy and puerperium. Srpski arhiv za celokupno lekarstvo. 2010; 138 Suppl 1:1 8-22.
14. Vitale SG, Padula F, Gulino FA. Management of uterine fibroids in pregnancy: recent trends. Current opinion in obstetrics & gynecology. 2015; 27(6): 432-437.
15. Zaima A, Ash A. Fibroid in pregnancy: characteristics, complications, and management. Postgraduate medical journal. 2011; 87(1034): 819-828.