

Rapidly growing solid abdominal mass in pregnancy, a case report of bladder fibroid in pregnancy

Ahmad Amir Ismail, Pek Sung Hoo, Nik Rafiza Afendi, Zharif Hussein, Rahimah Abdul Rahim, Errina Mohamad Zon

ABSTRACT

We present a case report of rapid growing bladder fibroid in pregnancy. A 28 years old presented initially with lower abdominal discomfort and progressive growing abdominal mass size 22 weeks uterus with no menstrual disturbances or compressive symptoms such as urinary or bowel symptoms. A diagnosis of solid ovarian tumor was made after computed tomography (CT) scan. She was then found to be pregnant prior to surgery. Hence, the surgery was postponed to second trimester of pregnancy. Upon assessment at 14 weeks of pregnancy, the mass had grown up to 26 weeks size of uterus. Intraoperatively, huge bladder fibroid with normal uterus and ovaries were found, confirmed by histopathology later. The fibroid was removed successfully but complicated with partial cystectomy and reconstruction. It healed without complication. The pregnancy progressed well till term. A healthy baby was delivered via emergency caesarean section due to poor progress of labor.

Keywords: Bladder fibroid, Pregnancy, Solidovarian tumor

Ahmad Amir Ismail¹, Pek Sung Hoo², Nik Rafiza Afendi¹, Zharif Hussein³, Rahimah Abdul Rahim¹, Errina Mohamad Zon²

Affiliations: ¹Senior Lecturer, Obstetrics & Gynaecology Department, School of Medical Science, Universiti Sains Malaysia, Kota Bharu, Kelantan, Malaysia; ²Clinical Lecturer, Obstetrics & Gynaecology Department, School of Medical Science, Universiti Sains Malaysia, Kota Bharu, Kelantan, Malaysia; ³Trainee Specialist, Obstetrics & Gynaecology Department, School of Medical Science, Universiti Sains Malaysia, Kota Bharu, Kelantan, Malaysia.

Corresponding Author: Pek Sung Hoo, Clinical Lecturer, Obstetrics & Gynaecology Department, School of Medical Science, Universiti Sains Malaysia, Kota Bharu, Kelantan, Malaysia; Email: hoopeksung@usm.my

Received: 14 November 2018

Accepted: 16 July 2019

Published: 30 July 2019

How to cite this article

Ismail AA, Hoo PS, Afendi NR, Hussein Z, Rahim RA, Zon EM. Rapidly growing solid abdominal mass in pregnancy, a case report of bladder fibroid in pregnancy. J Case Rep Images Obstet Gynecol 2019;5:100049Z08AI2019.

Article ID: 100049Z08AI2019

doi: 10.5348/100049Z08AI2019CR

INTRODUCTION

Leiomyoma of bladder is a relatively rare condition in our practice. About 0.43% leiomyomas account for all of bladder tumors [1]. So far about 250 cases of leiomyoma of the bladder have been reported in the literatures [2]. The incidence of leiomyoma of the bladder is approximately three times higher in women than in men based on the theory that leiomyomas are estrogen sensitive. It occurs predominantly in young adult females. Most of the patients present with nonspecific urinary symptoms or pelvic pain [1-4].

We present a case of primigavida who presented with abdominal mass in pregnancy with initial diagnosis of ovarian tumor, then found out bladder tumor intraoperatively and finally histopathological examination (HPE) confirmed leiomyoma of the bladder.

CASE REPORT

A 28-year-old, married, nulliparous female presented with lower abdominal discomfort and suprapubic mass, which was progressively increasing in size since four months ago. She does not have any menstrual cycle disturbance previously, constitutional symptoms, or

any compressive symptoms, such as urinary or bowel symptoms.

On general examination, she is a small size female. Per abdomen examination revealed a mass arising suprapubically up to the size of 22 weeks gravid uterus, with hard in consistency, smooth surface, fixed, and no evidence of ascites. Bimanual examination confirmed a hard pelvic mass which was separated from the uterus, the uterus was 6/52 in size and no adnexa or POD mass was appreciated. Urine pregnancy test was negative.

Bedside ultrasound revealed a huge mass located anterior to the uterus with mixed solid cystic appearance, measuring 14×9.4 cm. The uterus was pushed posteriorly by the mass, and it measured 7.5×4.4 cm. No adnexal mass noted, ascites or hydronephrosis noted. Serum Ca125 was 141.2 IU, and other tumor markers were normal.

Initial diagnosis of pedunculated fibroid was made with a differential diagnosis of solid ovarian tumor. Computed tomography scan of the thorax, abdomen, and pelvis showed large pelvic mass arising from right hemipelvis measuring 9.6×13.2×14.5 cm, with normal uterus and left ovary. The differential diagnoses were fibroid or right ovarian tumor. Exploratory laparotomy and cystectomy ± salphingo-oophorectomy were offered.

Unfortunately, during the day of admission for surgery, she was found out to be pregnant about six weeks. Hence the operation was postponed to 14 weeks of gestation. Reassessment prior to operation noted that the size of the mass had increased to 26 weeks size of gravid uterus.

Intraoperatively, there was a huge solid mass mainly originated from the bladder, with lobulated surface, dilated blood vessels, and densely adhered to the anterior abdominal wall (Figure 1). The uterus was 14 weeks size, and was pushed posterolaterally by the mass. Both ovaries were normal (Figure 2). The urology team was called for help, and preceded with debulking of bladder tumor and partial cystectomy and reconstruction. Postoperatively, she was put on suprapubic catheter and continuous bladder drainage for two weeks. The recovery was uneventful.

Histopathological examination of the bladder mass confirmed leiomyoma of the bladder, and the bladder wall tissue revealed fibromuscular tissue mixed with adipose tissue.

Her pregnancy progressed well till term. A healthy baby delivered via emergency caesarean section due to poor progress of labor.

DISCUSSION

The main reason we performed surgery on this patient mainly because of rapidly growing pelvic mass which was thought highly suspicious for malignancy.

Our preoperative diagnosis was solid ovarian tumor which was most likely germ cell tumor (dysgerminoma or teratoma) as it is commonly presented in pregnancy. The

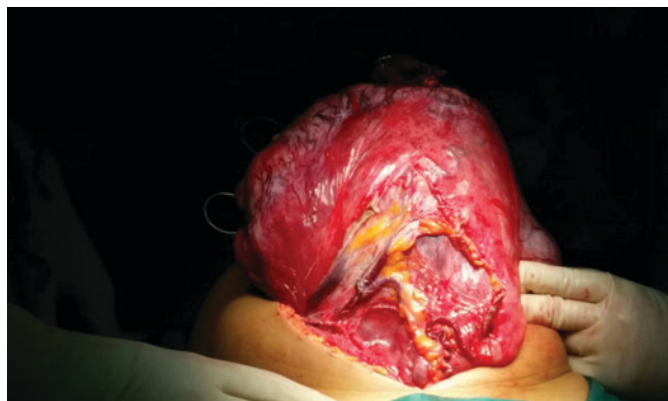


Figure 1: Extra-vesicle urinary bladder fibroid, hard, lobulated surface, dilated blood vessels.

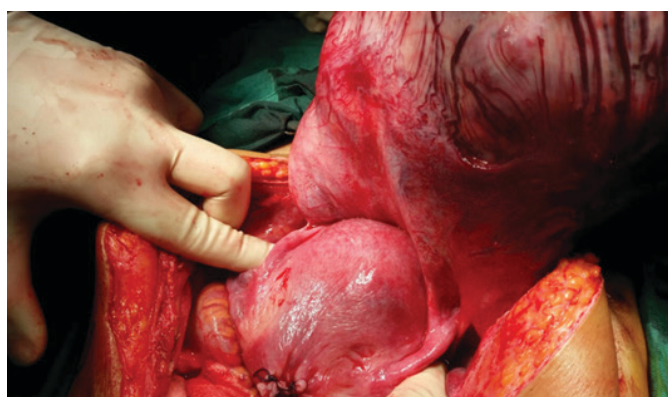


Figure 2: Normal uterus and ovaries with no adhesion.

diagnosis was made based on the clinical and imaging findings (ultrasound and CT scan) prior to pregnancy but without raised tumor marker level. The mass grew rapidly after she was pregnant. Intraoperatively, the rare extra-vesicle urinary bladder fibroid was diagnosed.

Bladder leiomyomas can be extravesical, intramural, or endovesical. The commonest type, endovesical comprised of 63%, followed by extravesical of 30% cases, and the least common type is the intramural represents 7% of cases. Most of the bladder leiomyomas are asymptomatic except endovesical type that commonly presents with urinary symptoms [1–4].

The etiology of these tumors remains unknown. Some authors proposed that leiomyomas may arise from chromosomal abnormalities, hormonal influences, bladder musculature infection, perivascular inflammation, or dysontogenesis [3–6]. The female predominance during reproductive age suggests that hormonal influence which similar like uterine fibroid hypothesis (estrogen dependent) [1].

Leiomyomas may be asymptomatic but usually present with obstructive symptoms (49%), irritative symptoms (38%), and hematuria (11%) [3, 4].

Although magnetic resonance imaging (MRI) is able to differentiate mesenchymal tumors from the commoner type, transitional cell tumors, and the malignant

leiomyosarcoma, but the cystoscopy and biopsy of the lesion still necessary to confirm the histopathology prior to exploration [7–10].

In this case, our patient had no urinary symptoms, mainly because the mass is extravesical type. As a result, MRI and cystoscopy were not performed prior to surgery. Intraoperatively, the solid mass was huge, mainly originated from the bladder, with lobulated surface, dilated blood vessels, and densely adhered to the anterior abdominal wall. This is consistent with literatures [1–4]. Perhaps, preoperative MRI might able to help us with the diagnosis, however the final diagnosis still depend on the intraoperative findings and the histopathological examination [10].

CONCLUSION

In conclusion, the rare bladder fibroid (estrogen-dependent tumor) should be considered as one of the differential diagnoses in pregnant patient presents with rapid growing solid pelvic mass because it is predominantly occurred in women. The size is the main reason for the women presented to us with the symptoms. Surgical excision is the standard approach to diagnosis and treatment.

REFERENCES

1. Erdem H, Yildirim U, Tekin A, Kayikci A, Uzunlar AK, Sahiner C. Leiomyoma of the urinary bladder in asymptomatic women. *Urol Ann* 2012;4(3):172–4.
2. Park JW, Jeong BC, Seo SI, Jeon SS, Kwon GY, Lee HM. Leiomyoma of the urinary bladder: A series of nine cases and review of the literature. *Urology* 2010;76(6):1425–9.
3. Knoll LD, Segura JW, Scheithauer BW. Leiomyoma of the bladder. *J Urol* 1986;136(4):906–8.
4. Goluboff ET, O'Toole K, Sawczuk IS. Leiomyoma of bladder: Report of case and review of literature. *Urology* 1994;43(2):238–41.
5. Teran AZ, Gambrell RD Jr. Leiomyoma of the bladder: Case report and review of the literature. *Int J Fertil* 1989;34(4):289–92.
6. Neto AG, Gupta D, Biddle DA, Torres C, Malpica A. Urinary bladder leiomyoma during pregnancy: Report of one case with immunohistochemical studies. *J Obstet Gynaecol* 2002;22(6):683–5.
7. Illescas FF, Baker ME, Weinerth JL. Bladder leiomyoma: Advantages of sonography over computed tomography. *Urol Radiol* 1986;8(4):216–8.
8. Kabalin JN, Freiha FS, Niebel JD. Leiomyoma of bladder. Report of 2 cases and demonstration of ultrasonic appearance. *Urology* 1990;35(3):210–2.
9. Sundaram CP, Rawal A, Saltzman B. Characteristics of bladder leiomyoma as noted on magnetic resonance imaging. *Urology* 1998;52(6):1142–3.
10. Lott S, Lopez-Beltran A, Maclennan GT, Montironi R, Cheng L. Soft tissue tumors of the urinary bladder, Part I: Myofibroblastic proliferations, benign neoplasms,

and tumors of uncertain malignant potential. *Hum Pathol* 2007;38(6):807–23.

Author Contributions

Ahmad Amir Ismail – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Pek Sung Hoo – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Nik Rafiza Afendi – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Zharif Hussein – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Rahimah Abdul Rahim – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Errina Mohamad Zon – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Guarantor of Submission

The corresponding author is the guarantor of submission.

Source of Support

None.

Consent Statement

Written informed consent was obtained from the patient for publication of this article.

Conflict of Interest

Authors declare no conflict of interest.

Data Availability

All relevant data are within the paper and its Supporting Information files.

Copyright

© 2019 Ahmad Amir Ismail et al. This article is distributed under the terms of Creative Commons Attribution License which permits unrestricted use, distribution and reproduction in any medium provided the original author(s) and original publisher are properly credited. Please see the copyright policy on the journal website for more information.

Access full text article on
other devices



Access PDF of article on
other devices





INTERNATIONAL JOURNAL OF
CASE REPORTS AND IMAGES



VIDEO JOURNAL OF
CLINICAL RESEARCH



VIDEO JOURNAL OF
BIOMEDICAL SCIENCE



INTERNATIONAL JOURNAL OF
HEPATOBIILIARY AND
PANCREATIC DISEASES



INTERNATIONAL JOURNAL OF
BLOOD TRANSFUSION AND
IMMUNOHEMATOLOGY



EDORIUM JOURNAL OF
OPHTHALMOLOGY



Submit your manuscripts at
www.edoriumjournals.com



EDORIUM JOURNAL OF
MEDICINE



EDORIUM JOURNAL OF
CARDIOTHORACIC AND
VASCULAR SURGERY



JOURNAL OF CASE REPORTS
AND IMAGES IN ORTHOPEDICS
AND RHEUMATOLOGY



EDORIUM JOURNAL OF
PSYCHOLOGY



EDORIUM JOURNAL OF
CELL BIOLOGY



JOURNAL OF CASE REPORTS AND IMAGES IN
DENTISTRY



EDORIUM JOURNAL OF
CANCER



EDORIUM JOURNAL OF
PSYCHIATRY



JOURNAL OF CASE REPORTS AND
IMAGES IN INFECTIOUS DISEASES



EDORIUM JOURNAL OF
ANATOMY AND EMBRYOLOGY



EDORIUM JOURNAL OF
SURGERY



JOURNAL OF CASE REPORTS
AND IMAGES IN PATHOLOGY



EDORIUM JOURNAL OF
ANESTHESIA