

Intra-leiomyoma hemorrhage in postmenopausal woman presented with acute abdominal pain

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ABSTRACT

Intra-leiomyoma hemorrhage in postmenopausal woman is a very rare complication. This case report represents a case report of spontaneous hemorrhage inside the uterine leiomyoma in postmenopausal woman who presented with acute abdomen. A 55-year-old woman, multipara, postmenopausal for 7 years, known case of multiple fibroid uteruses, was presented to the emergency department of Ahmadi Hospital, Kuwait Oil Company, with acute abdominal pain and vomiting, without any reported trauma and/or associated vaginal bleeding. The studied woman was generally stable regarding her vital signs, her hemoglobin dropped from 12 to 10.2 g/dl. Abdominal examination revealed; palpable pelvi-abdominal mass firms in consistency with tenderness and guarding which provisionally support the diagnosis of degenerated fibroids or intra-leiomyoma hemorrhage. The diagnosis was confirmed by basic pelvi-abdominal ultrasound, followed by correction of the patient's general condition and total abdominal hysterectomy with bilateral salpingo-oophorectomy (TAHBSO). Bisected largest cystic fibroid showed brownish serous fluid inside with organized clotted hematoma which confirmed the diagnosis of intra-leiomyoma hemorrhage. Postoperatively, the studied woman received an unit of packed red blood cells for correction of the postoperative anemia and discharged from the hospital in good general condition for postoperative follow-up in the outpatients' department on iron tablets. This case report represents a rare complication of intra-leiomyoma hemorrhage in postmenopausal, diagnosed by the basic clinical and ultrasound findings. The case was managed by TAHBSO after correction of the general condition because of the increased risk of the sarcomatous changes of the uterine fibroid in postmenopausal women.

Keywords: Hemorrhage, intra-leiomyoma, postmenopausal

Introduction

Uterine leiomyomas (fibroids) are the most common pelvic tumors affecting females in the reproductive age.^[1]

Uterine leiomyomas are hormone-dependent benign tumors, responding to both estrogen and progesterone. Uterine

leiomyomas often increase in size during pregnancy and usually decrease in size after menopause.^[2]

Spontaneous intra-leiomyoma hemorrhage as an acute complication of uterine leiomyoma is rarely seen and rarely reported in literature.^[3,4]

Intratumor massive bleeding with subsequent hypovolemia is extremely rare and only reported by after delivery.^[4]

This case report represents a case report of spontaneous hemorrhage inside the uterine leiomyoma in postmenopausal woman who presented with acute abdomen.

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Case Report

A 55-year-old multipara (seven vaginal deliveries), postmenopausal for 7 years, known case of multiple fibroid uterus, presented to the emergency department of Ahmadi Hospital, Kuwait Oil Company, with acute abdominal pain of 6 h duration and vomiting, without any reported trauma and/or associated vaginal bleeding. She agreed and gave consent to participate in this case report presentation.

The studied woman was generally stable regarding her vital signs; her hemoglobin dropped from 12 g/dl during the last visit in the OPD (outpatients' department) to 10.2 g/dl on admission from the emergency department.

Abdominal examination revealed; palpable pelvi-abdominal mass firms in consistency with tenderness and guarding which provisionally support the diagnosis of degenerated fibroids and/or hemorrhage inside the uterine fibroid (intra-leiomyoma hemorrhage), especially due to the sudden onset abdominal pain and the drop of the patient's hemoglobin from 12 to 10.2 g/dl.

The departmental pelvi-abdominal ultrasound showed multiple well-circumscribed hypoechoic lesions arising within the surrounding myometrium, confirming the diagnosis of multiple fibroid uterus with complex echogenic appearance and areas of cystic change inside the largest fibroid suggesting the diagnosis of degenerated and/or intra-leiomyoma hemorrhage inside the largest fibroid.

Correction of the patient's general condition using the intravenous iron infusion formula of total iron needed in mg is $2.4 \times \text{prepregnancy weight in kg} \times (\text{target hemoglobin concentration} - \text{actual hemoglobin concentration}) \text{ g/dl} + 500 \text{ mg}$. About 12 g/dl was the target hemoglobin concentration, and 2.4 is a correction factor, while the 500 is the amount of stored iron in adult pregnant women.^[5-7]

Two weeks later, when the patient's hemoglobin was 11 g/dl, preoperative investigation and cross-matching were done, followed by patient's counseling for total abdominal hysterectomy with bilateral salpingo-oophorectomy (TAHBSO) and anesthesia consultation.

At laparotomy, the uterus was distorted in shape with multiple fibroids shape [Figure 1] and the largest fibroid which complicated with hemorrhage was soft in consistency with black outer surface and omental adhesion on its surface [Figure 2].

After dissection of omental adhesions, TAHBSO is done without intraoperative complications. The removed enlarged distorted uterus was measuring 22 cm length \times 15 cm width [Figure 2].

Bisected largest cystic fibroid showed brownish serous fluid inside with organized clotted hematoma which confirms the diagnosis of intra-leiomyoma hemorrhage [Figure 3].

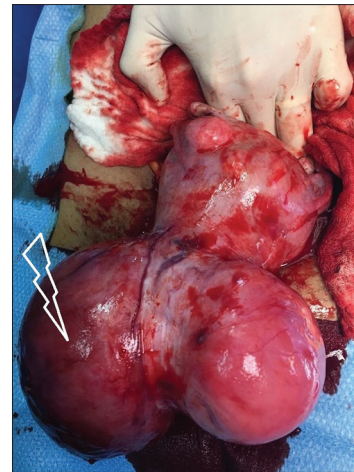


Figure 1: Intra-operative multiple fibroid uterus and white arrow indicating the fibroid complicated with intra-leiomyoma hemorrhage



Figure 2: The surgically removed measuring 22 cm length \times 15 cm width with black outer surface of the largest fibroid complicated with intra-leiomyoma hemorrhage



Figure 3: Bisected largest cystic fibroid showed brownish serous fluid inside with organized clotted hematoma

Postoperatively, the studied woman received on unit of packed red blood cells for correction of the postoperative anemia and

discharged from the hospital in good general condition for postoperative follow-up in the OPD on iron tablets.

The histopathological examination of the surgically removed uterus showed multiple cellular leiomyomas with evidence of hemorrhagic infarction of the largest myoma, without any malignant cells, normal uterine cervix, ovaries, and fallopian tubes.

Discussion

The common causes of acute abdomen in cases of fibroid uterus include torsion of subserous fibroid, red degeneration, and sarcomatous degeneration.^[8] The various types of fibroid degeneration include hyaline, myxoid, cystic, and red degeneration.^[2]

Red or carneous degeneration is occasionally seen in uterine fibroids, which develops most frequently during pregnancy.^[9]

Spontaneous intra-leiomyoma hemorrhage in a case of fibroid uterus is extremely rare and can also present as acute abdomen.^[8]

Sometimes, bleeding from torn enlarged veins coursing over the surface of subserous leiomyomas, resulting in intra-peritoneal hemorrhage and hypovolemic shock.^[4]

Ultrasound is the initial imaging diagnostic tool for uterine fibroids and its suspected complications. A uterine fibroid is often seen by ultrasound as hypoechoic well-circumscribed lesion arising from the surrounding myometrium, while degenerated fibroids give a more complex ultrasound appearance with areas of cystic change.^[1]

Computed Tomography (CT) scan is not the primary modality for diagnosing or evaluating fibroids; however, fibroids are often found incidentally at CT.^[10]

Magnetic resonance imaging is more accurate in evaluating the uterine fibroids size, number, and presence or extent of degeneration, but it requires a stable patient and may be difficult to perform in a timely fashion in the emergency department.^[3]

The definitive treatment of fibroid uterus is surgical in the form of myomectomy and/or hysterectomy after correction of the patient's generally condition.^[3]

Alternative to surgery, percutaneous embolization of uterine artery has become established treatment for non-acute uterine hemorrhage. It is minimally invasive and also maintains patient's fertility. It is also an effective treatment to control intractable uterine hemorrhage secondary to uterine fibroids.^[11]

Our patient managed with TAHBSO after correction of the general condition, because of the increased risk of sarcomatous changes of the uterine fibroids at her postmenopausal age.

Conclusion

This case report represents a rare complication of intra-leiomyoma hemorrhage in postmenopausal, diagnosed by the basic clinical and ultrasound findings. The case was managed by TAHBSO after correction of the general condition because of the increased risk of the sarcomatous changes of the uterine fibroid in postmenopausal women.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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