



2 CASE REPORTS OF HEMOPERITONEUM CAUSED BY BLEEDING UTERINE FIBROIDS

Obstetrics & Gynaecology

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KEYWORDS

INTRODUCTION

Fibroids or leiomyoma are the most common uterine tumour. While most fibroids are asymptomatic, some may lead to symptoms such as abnormal uterine bleeding, persistent lower abdominal pain, infertility/sub-fertility, pressure symptoms such as urine retention, constipation (1). It is quite uncommon for a fibroid to present as an acute life-threatening condition such as torsion, degeneration, avulsion and intraabdominal haemorrhage. In few cases a spontaneous or traumatic rupture of superficial vessels on sub serosal fibroid can lead to life-threatening emergencies.

Review of Literature

Less than a hundred cases have been reported in the literature. Rokitansky was the first to describe this complication in 1861. Less than 30 cases have been reported between 1950 and the present day, with nearly fifty before the 1950s. Study of the nearly thirty most recent cases shows that this acute complication affects women throughout the potentially childbearing years, (extremes 22–50 years old, mean: 37.5) (2). The reported cases showed that the average weight of the myoma was 3,000 g and the diameter ranged from 10 to 16 cm (3).

Several factors have been reported as causing the rupture of serosal vessels overlying the subserosal uterine fibroid (4). In a report, there were 14 cases (53.8%) of unknown cause, 7 cases (26.9%) during menstruation, 3 cases (11.5%) during defecation, and 1 case (3.8%) of falls and exercise (5).

Case 1

A 36-year-old P3L3 recently diagnosed with Rheumatic Heart Disease (RHD) with severe Mitral Stenosis, status post Mitral Valve Replacement (MVR) done 1 week back on anticoagulant therapy (Tab. Warfarin 25 mg OD) presented with sudden onset abdominal pain, associated with abdominal distension, vomiting, urine retention and constipation. She had regular menstrual cycles with last menstrual period (LMP) 4 days back. CT scan was suggestive of bulky uterus with large hyperdense heterogenous structure (approx. 12.1x10.1x9.6 cm- 586cc) on uterine fundus, 2 more similar structures seen anterior and towards right side of the fundus (approx. 6.9x4.6x4.1cm- 65cc and 6.9x5.2x4.9cm-88 cc), with moderate to severe ascites. Patient was referred to higher centre due to increasing hemodynamic instability. On examination pulse 120/min, BP:90 mmHg systolic, with pallor and abdominal distension with tenderness, on Per Vaginal examination uterine size could not be assessed due to gross distention, an emergency ultrasonography (USG) was done, suggestive of gross hemoperitoneum. A urine pregnancy test was ordered and found to be negative.

Emergency exploration was done under general anaesthesia, with transfusion of adequate blood and blood products. Intraoperative findings revealed about 2 litres of hemoperitoneum drained, large sub serosal fibroid of about 12x10x10cm and 2 other fibroids of smaller sizes, with bleeding sub serosal veins. Intraoperative decision of total abdominal hysterectomy was taken and proceeded with. Postoperatively patient was stabilized, anticoagulants restarted and discharged.



CASE 1

Figure 1- bleeding surface of uterine fibroid

Figure 2- location of bleeding vessel over the fibroid

Figure 3- anterior view of the specimen of uterus with cervix

Figure 4- posterior view of the specimen where all 3 fibroids are visible

HPE : Multiple leiomyomata, with red degeneration in few

Case 2

A 45-year-old P2L2, presented with sudden onset pain in abdomen since a day associated with abdominal distension and an episode of syncope. Patient had regular menstrual cycles with ongoing menses since past 3 days. A USG was done which was suggestive of uterine fibroids. On examination, pulse was 108/min, BP of 110/70 mmHg and SpO₂ 99%, pallor was present. On per abdominal examination, guarding, tenderness, rigidity was present and on per vaginal examination, uterus was about 12-14 weeks in size, anteverted, cervical motion tenderness was present along with altered discharge. Culdocentesis was performed, about 2-3 cc of blood-stained fluid was aspirated. Beta HCG less than 2.0 ruled out pregnancy.

On USG patient had multiple intrauterine fibroids, largest one on fundus measuring 8.7x7.2x6.6cm, a right Para ovarian cyst with hemoperitoneum, giving a likely diagnosis of ruptured Para ovarian cyst.

Patient was taken up for emergency exploration in view of the same. Intraoperatively about 700cc hemoperitoneum was drained, source of bleeding was a superficial vein on a large subserosal fibroid (8x6x6cm) on the uterine fundus. The bleeding vessel was ligated in an attempt to tackle the haemorrhage. Intraoperative decision was taken to proceed with a total abdominal hysterectomy due to high risk of rebleeding through dilated vessels. Patient was transfused with adequate blood perioperatively and discharged after stabilization.



CASE 2

Figure 5- Bleeding vein on sub serosal fibroid

Figure 6- Fundal location of the fibroid with dilated veins

Figure 7- Ligated vein over subserosa fibroid in a to attain haemostasis prior to decision of TAH.

HPE: Leiomyoma with acute salpingitis and cervicitis

DISCUSSION

Even though uterine fibroids are so common, intraperitoneal haemorrhage is a rare complication due to bleeding from the fibroids and is a life-threatening condition (2). Some causes of hemoperitoneum associated with leiomyoma include a ruptured leiomyoma, rupture of a subserosal vein overlying a uterine myoma (6), bleeding from a subserosal artery (7), a lacerated or avulsed leiomyoma. In most cases, bleeding from a uterine leiomyoma has been associated with trauma or torsion of the tumour, but spontaneous rupture of the superficial vessel is a rare possibility, and source of bleeding is mainly venous (8).

The three symptoms of abdominal pain, hypotension and hemoperitoneum in young women of childbearing age at first suggests the diagnosis of an ectopic extra-uterine pregnancy, rupture of a corpus luteum, adnexal torsion or torsion of a fibroma, and secondly rupture of an ovarian tumour or intra-cystic haemorrhage (9). In the above cases, a negative β HCG result and radiological imaging eliminated these diagnoses. If a uterine mass is found the possible diagnosis of rupture of a leiomyoma should be discussed. A specific preoperative diagnosis can rarely be established in these cases. Computed tomography and ultrasound can show the hemoperitoneum but usually do not reveal the source of the bleeding (10).

In both these cases the peritoneal bleeding started during menstruation, so the likely cause can be venous congestion. While the first patient had a premorbid condition (RHD with MVR) and was on anticoagulants, the second patient had a spontaneous onset.

The management was focussed at searching the source of bleeding to curtail it. Exploratory laparotomies were carried out to confirm the

diagnosis and to have an adequate field for the corrective surgery. Once identified it was decided to perform hysterectomies in both the patients as they had completed families and had high risk of recurrence.

In some cases, a combined strategy can be decided for treatment as per the clinical scenario; in case of a nulliparous patient of reproductive age group, starting the treatment with embolization of the uterine arteries to obtain haemodynamic stabilisation, followed subsequently by a scheduled myomectomy or a hysterectomy given the number of leiomyomas and the absence of any wish to become pregnant (7). Laparoscopic approach to identify the source of bleeding followed by myomectomy or hysterectomy have also been tried.

CONCLUSION

Despite its rarity, a bleeding vessel over fibroid should be included in the differential diagnosis of a hemoperitoneum of ambiguous origin. Rapid diagnosis and management are essential in this potentially life-threatening condition. Surgeons should consider the possibility of this complication in women with acute abdominal pain and a history of uterine leiomyoma in order to prevent severe morbidity or even mortality. When a patient undergoes conservative management of large asymptomatic subserosal fibromas, she should be informed of this rare complication.

REFERENCES

1. B. Vollenhoven I Introduction: the epidemiology of uterine leiomyomas Baillière's Clin. Obstet Gynaecol, 12 (1998), pp. 169-176
2. Fontarensky M, et al. Acute complications of benign uterine leiomyomas: treatment of intraperitoneal haemorrhage by embolization of the uterine arteries. Diagn Interv Imaging. 2013;94(9):885-90.
3. W.H. Su, S.M. Cheung, S.P. Chang, W.L. Lee Internal bleeding from a ruptured serosal vein covering the myoma surface mimicking upper gastrointestinal bleeding Taiwan J Obstet Gynecol, 47 (2008), pp. 352-354
4. Saidi F, Constable JD, Ulfelder H. Massive intraperitoneal hemorrhage due to uterine fibroids. Am J Obstet Gynecol 1961;82:367-74.
5. Mattison DR, Yeh SY. Hemoperitoneum from rupture of a uterine vein overlying a leiomyoma. Am J Obstet Gynecol 1980;136:415-6.
6. Bou Nemer L, et al. Rupture of a subserosal vein overlying a leiomyoma causing hemoperitoneum. J Gynecol Surg. 2014;30(6):367-9.
7. Horowitz E, et al. Massive hemoperitoneum due to rupture of an artery overlying a uterine leiomyoma: a case report. Acta Obstet Gynecol Scand. 2005;84(4): haemoperitoneum. West Afr J Med. 2000;19(2):158-9.
9. Acute abdominal pain. A prospective multicentric study. Nouv Presse Med. 1981;19:10:3771-3.
10. Kamat NV, et al. Ruptured degenerated uterine fibroid diagnosed by imaging. Obstet Gynecol. 2001;98(5):961-3.