Case report

Spontaneous rupture of a huge subserous fibroid vessel with massive hemoperitoneum: A rare case of fibroid.

ABSTRACT

Background: Spontaneous rupture is a potentially life-threatening acute complication of uterine fibroid. It is a very rare clinical diagnosis and hardly presents with massive hemoperitoneum. This is a case of spontaneous rupture of uterine fibroid vessels with massive hemoperitoneum, necessitating prompt surgical intervention and massive transfusion.

Case report: Mrs A. I was a 35year-old Para 1 who presented to the accident and emergency department of the Rivers State University Teaching Hospital (RSUTH) on the 14th October 2021 with a three-month history of amenorrhoea, and 10 hours history of severe lower abdominal pains associated with dizziness. She was in shock and also had abdominal distension and tenderness. Ultrasonography showed massive hemoperitoneum, uterine fibroids and a left adnexal mass. She had an emergency exploratory laparotomy and the findings were massive hemoperitoneum, a left ovarian cyst and a huge subserous uterine fibroid with an actively bleeding surface vessel. Myomectomy and left ovarian cystectomy were done. She received 5 units of blood perioperatively and had an uneventful post-operative recovery.

Conclusion: Spontaneous rupture of uterine fibroid is a very rare clinical condition. It can lead to significant morbidity and mortality if not recognised and managed promptly. Therefore a high index of suspicion is necessary for women with huge uterine fibroids and hemoperitoneum.

Keywords: Spontaneous rupture, Subserous fibroid, Hemoperitoneum, Laparotomy, Myomectomy.

INTRODUCTION

Uterine fibroids are the commonest benign pelvic tumour in women [1,2]. They are often asymptomatic and rarely associated with life-threatening complications [2,3]. Acute complications of a uterine fibroid are uncommon and may require immediate surgical treatment

[4]. The most dreaded acute complications are acute abdomen due to fibroid torsion or intra-abdominal haemorrhage from rupture of the fibroid [4]. Fibroid rupture is mostly due to trauma [2]. However, Spontaneous rupture of uterine fibroid is very rare and only about 100 cases so far have been reported in the literature [4,5]. The exact mechanism of spontaneous fibroid rupture is poorly understood [5]. The diagnosis is difficult pre-operatively due to the rarity of the condition [6]. The occurrence of massive intra-abdominal haemorrhage due to spontaneous rupture of uterine fibroid is extremely rare [4,7]. This is a case of rupture of a uterine fibroid with massive hemoperitoneum necessitating emergency laparotomy, myomectomy and massive transfusion.

CASE REPORT

Mrs A. I was a 35year-old Para 1 (alive) who presented to the accident and emergency department of the Rivers State University Teaching Hospital on the 14th of October, 2021. She presented with severe lower abdominal pain of 10 hours duration, associated with weakness and dizziness. There was no vaginal discharge, vaginal bleeding or trauma. She was amenorrheic for three months following the removal of a subdermal implant.

On examination, she was conscious and alert, dyspnoeic and severely pale. The pulse was 126 beats/minute and the blood pressure was 80/50mmHg. Her abdomen was distended, and there was generalised tenderness and guarding. Intraperitoneal fluid was also demonstrated. Her packed cell volume was 18%. An abdominopelvic ultrasound scan that was done before the presentation was suggestive of ruptured ectopic pregnancy with massive hemoperitoneum extending into the Morrison's pouch. The ultrasound scan also showed a 14cm x 12cm sized uterine fibroid and a complex echogenic mass in the left adnexa. A diagnosis of ruptured ectopic pregnancy with massive hemoperitoneum and a huge uterine fibroid was made. She was resuscitated with two litres of intravenous normal saline, a unit of blood and intranasal oxygen. The diagnosis and management were explained to her and consent was obtained for surgery. She subsequently had an emergency exploratory laparotomy, and the findings were hemoperitoneum of 3.2 Litres, a left ovarian cyst about 5cm x 5cm and a 20 weeks size uterus harbouring a fundal subserous fibroid. The fibroid measured 16cm x12cm x10cm and had a surface vessel that was ruptured at two points (about 2cm apart) and was actively bleeding. The vessel was ligated, then myomectomy and left ovarian cystectomy were done. She was transfused with 2 units of blood intraoperatively. She received antibiotics, analgesics and haematinics postoperatively, as well as

another 2 units of blood. She had an uneventful recovery and was discharged on the 5th postoperative day. She was seen two weeks later at the gynaecology clinic and had no complaint. The histology report was consistent with uterine fibroid and endometrioid cyst.

Fig. 1. Ruptured uterine fibroid with massive hemoperitoneum

DISCUSSION

Uterus fibroid is one of the commonest benign tumours of the female genital tract. It is often asymptomatic, when symptomatic it may present with abnormal uterine bleeding, abdominal swelling, pelvic pressure or subfertility [8].

Acute complications of uterine fibroids are uncommon [4]. Intra-abdominal haemorrhage from rupture of uterine fibroid is a potentially life-threatening complication. It is very rare, and about 100 cases have so far been documented in the literature [4,5]. It usually results from rupture of the surface fibroid veins as in this case, rarely arterial bleeds can occur due to hypertension [6,7].

The exact mechanism that initiates the rupture of the surface vessels is poorly understood [5,6]. Common risk factors include large fibroid size (>10cm), trauma, torsion, alcohol consumption, and venous congestion (due to pregnancy, weight-bearing, defaecation, or strenuous exercise) [6]. Mrs A. I had a huge fundal uterine fibroid.

Spontaneous rupture of uterine fibroid is a very rare phenomenon [5,7]. It is often mistaken for other common pathologies and diagnosed incidentally at surgery as was done in this case [6,9]. Diagnosis of ruptured fibroid is difficult preoperatively owing to the rarity of the condition

[6,10], it could be suspected from a history of abdominal pain and swelling with radiologic findings of hemoperitoneum and uterine fibroid [6]. Although ultrasonography is insensitive in cases of small hemoperitoneum and non-specific in locating the source of the hemoperitoneum [2,7], it is a very useful imaging modality to aid the preoperative diagnosis of ruptured fibroid and can be performed at the bedside in unstable patients [2,7]. Magnetic resonance imaging and computed tomography scan can locate the source of the haemoperitoneum but may be difficult to perform in emergencies[7,10]. Preoperative diagnosis has been reported using contrast-enhanced computerized tomography[10-13].

Spontaneous fibroid rupture is a rare cause of massive hemoperitoneum [6,7]. Fewer than 30 cases of massive hemoperitoneum due to uterine fibroid has been reported since 1950 [6]. Common causes of massive hemoperitoneum include ruptured ectopic pregnancy, ruptured ovarian cyst/tumours and ruptured viscus [9]. Mrs A. I presented with massive hemoperitoneum and shock which was misdiagnosed for ruptured ectopic pregnancy.

Management involves prompt evaluation, stabilisation and emergency surgical intervention [7,9]. The surgical options of management are ligation of the bleeding vessels and/or Myomectomy or hysterectomy [7,9]. The decision at surgery depends on the patient age and desire for fertility [14]. Mrs A. I had ligation of the bleeding vessel and myomectomy as she was 35year-old and desires fertility.

CONCLUSION

The diagnosis of spontaneous rupture of uterine fibroid can often be challenging as the condition is rare. Therefore Gynaecologist should have a high index of suspicion when hemoperitoneum co-exist with huge uterine fibroids in women of reproductive age. Since laparotomy is necessary for treatment, adequate preparation for myomectomy or hysterectomy should be made as well.

CONSENT AND ETHICAL APPROVAL

As per university standard guidelines, participant consent and ethical approval have been collected and preserved by the authors.

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