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Case Report

Hemoperitoneum - Rare complication in Subserous Uterine Fibroid

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Abstract

Rupture of veins on the surface of sub-serous uterine fibroid is an uncommon cause of hemo-peritoneum. It is usually a silent and serious life threatening gynaecological emergency. We report a case of severe intra-abdominal bleeding secondary to rupture of veins on the surface of subserous fibroid. There was more than two litres of hemoperitoneum with active bleeding from the surface vein of sub-serous fibroid. Total abdominal hysterectomy was done. She received 5 units of fresh blood transfusion. The postoperative period was uneventful. A differential diagnosis of rupture of surface vessel of uterine fibroid must be kept, while dealing with a case of hemoperitoneum with pelvic mass.

Keywords: Hemoperitoneum, Rupture of surface vein in sub-serous fibroid, Gynaecological emergency

1. Introduction

Uterine fibroid is a frequently seen benign tumour in women of reproductive age group. Sub-serous fibroids are relatively asymptomatic unless they are moderate to large in size. They are mainly responsible for pressure symptoms. Bleeding from the surface of uterine fibroid is a rare cause of hemoperitoneum.[1] In most cases, bleeding is a result of trauma or torsion. Spontaneous rupture of a superficial vein of fibroid is extremely rare.[2] It is a life threatening emergency. Fewer than 100 cases have been reported.[3]

2. Case Report

Forty eight year old woman presented to outpatient department as a referred case from private practitioner, from distance of 200 km with the provisional diagnosis of ovarian mass or twisted ovarian tumour or malignant ovarian tumour. She had complaints of pain in abdomen of two days duration. Pain was insidious in onset and progressive in nature .Pain started in lower abdomen and then became generalized. She was taken to local general practitioner, who gave her symptomatic treatment. As intensity of pain increased, she was admitted in nearby hospital where in ultrasonography revealed intra-peritoneal collection of fluid and presence of a pelvic tumour. Patient had two episodes of vomiting and three episodes of loose stools in twenty four hours .As the condition of patient further deteriorated, she was referred to tertiary care hospital.

Her past menstrual history revealed that she had regular menses, but the menstrual flow had increased since last three years. There was no dysmenorrhoea. She had not consulted anyone for her menstrual complaints .She had married life of 25 years and had three full term normal deliveries in the past. She had undergone laparoscopic tubal ligation 20 years back. There was no significant past medical or surgical history. She was diagnosed case of mild hypertension, not on any treatment. She belonged to lower middle socio economic class and was staying in village.

On examination, her general condition was poor. She was unable to stand on feet due to severe weakness and pain in abdomen. Her extremities were cold and peripheral pulsations were weak. Her pulse rate was 120 beats per minute with low volume and blood pressure was100/70 mm of Hg. There was presence of gross pallor .There was no icterus, clubbing or thyroid swelling. Per abdominal examination revealed distension of abdomen **(Fig 1),** guarding and rigidity. There was presence of shifting dullness. A vague mass was felt in infra-umbilical region. Details of mass could not be ascertained due to distension of abdomen and pain. Per vaginal examination revealed tenderness and fullness in lower abdomen and a mass of 12 weeks size arising from posterior part of uterus. Uterus appeared to be floating in intra abdominal fluid. Detailed bi manual palpation could not be carried out. Per rectal examination revealed similar findings.

Emergency ultrasound examination of abdomen and pelvis revealed massive hemo-peritoneum and a 10x8 cm size heterogenous, predominantly solid pelvic mass with increased peripheral vascularity. The contour of the vascularity extended from11 to 3 o clock position of the uterus along its posterior and right lateral aspect. Right ovary could not be seen separately from the mass. Possibility of large uterine fibroid or ovarian mass was kept. Ultrasound guided peritoneal tap was done which revealed frank hemoperitoneum. In view of the clinical and radiological findings, possibility of rupture of surface veins of sub-serous fibroid or rupture of ovarian tumour was kept. Patient was taken for emergency laparotomy after obtaining high risk consent from the relatives. Laboratory investigations showed that her haemoglobin was 5.4 grams percent, packed cell volume was 17 percent, and platelet count was 3 lakh 26 thousand, Bleeding time, clotting time, APTT and PT INR were within normal limits.

Laparotomy revealed gross hemo-peritoneum of around two and half litres with big blood clots measuring approximately 500 grams**. (Fig 2)** Uterus was six to eight weeks size. There was a sub-serous fibroid of size 7-8cms x 4-5cms, arising from posterior aspect of fundus of the uterus with multiple sub-serosal veins on its surface**. (Fig 3)** One of the veins had given a way and was actively oozing. **(Fig 4**) There were two more small intramural fibroids in the uterus**. (Fig 5, 6)** Decision of abdominal hysterectomy was taken. Hemoperitoneum was drained. Abdominal cavity was explored for any additional pathology. Abdomen was closed after putting a sub-peritoneal drain. Patient received two units of blood during surgery and three units of blood in post operative period. Patient was discharged on tenth postoperative day.

Fig-1-Showing distended abdomen **Fig.2-Showing hemoperitoneum**

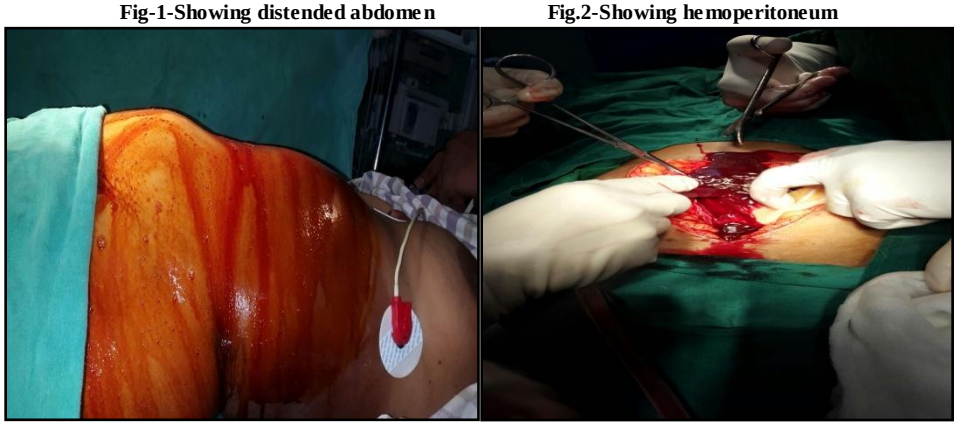


Fig 3 and 4-Showing sub-serous fibroid with surface vessels and acive bleeder

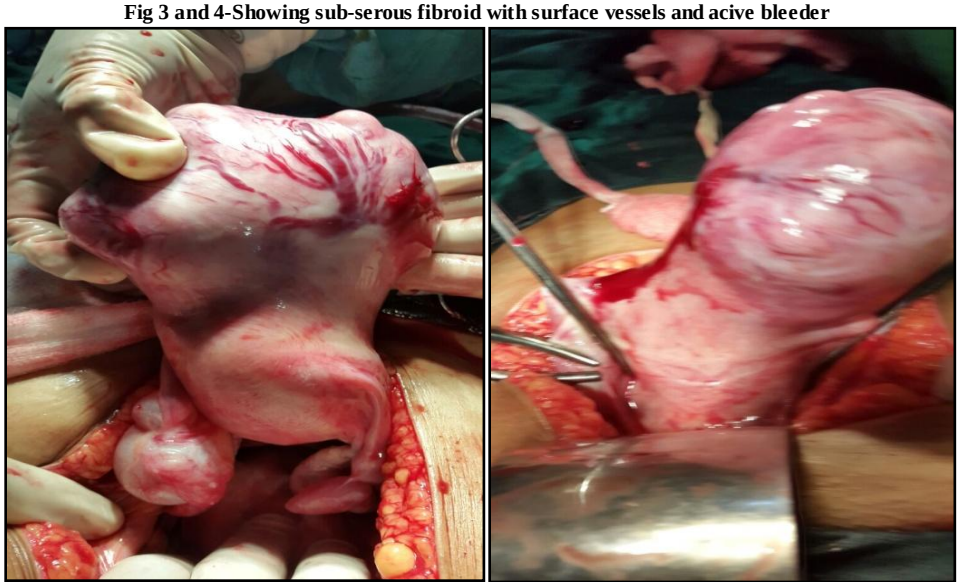
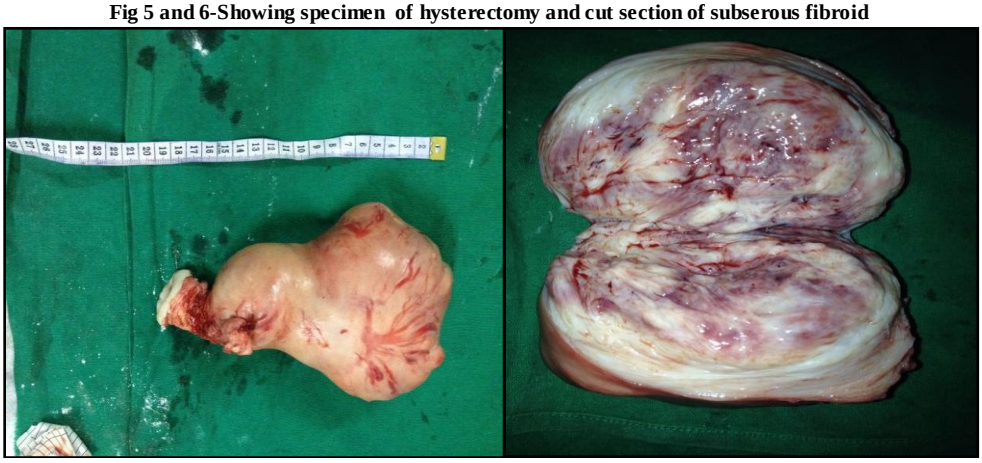


Fig 5 and 6-Showing specimen of hysterectomy and cut section of subserous fibroid



3. Discussion

Fibroid of the uterus is the commonest benign tumour seen in women of reproductive age[1]. Subserous fibroids are known for complications like torsion of pedicle and detachment from parent uterus forming wandering fibroid.[2] Rupture of surface veins of sub-serous fibroid causing severe intra-peritoneal bleeding is rare.[3] There is no literature available on exact incidence of this complication .Very few cases of such condition are reported in the literature. The outcome of management has been satisfactory as the deterioration in hemodynamic condition is late as compared to other conditions like ruptured ectopic pregnancy. Factors which have been reported to be associated with spontaneous rupture of superficial surface veins of sub-serous fibroid are abdominal trauma, sudden exertion, straining and erosion of vessel by friction or pressure of the tumour against sacral promontory. Increased dilatation of the surface veins during menstruation, parturition, inflammation and torsion of the pedicle are possible factors for rupture of vessel on the tumour surface.[2] Congestion of a vein overlying a fibroid, irrespective of the patient's age or parity or size of the fibroid, is a risk factor for venous rupture.[4] The present case did not have any of the above mentioned factors associated. The differential diagnosis of this condition, when associated with severe intra abdominal bleeding includes ruptured ectopic pregnancy, rupture of ovarian cyst and torsion of adnexal tumours. Acute abdominal pain, tenderness, signs of hemorrhage together with presence of subserous uterine fibroid should suggest the diagnosis of intra abdominal hemorrhage from ruptured surface vessels of fibroid.[5]

In this case; patient was unaware about the presence of fibroid in her uterus, as she had not consulted any gynaecologist for menorrhagia. She had not undergone abdominal or pelvic ultrasound in last ten years. Ultrasonologist must look for abnormal veins at the periphery of the subserous fibroids and must confirm them with the help of colour Doppler. Documentation of presence of abnormally tortuous and superficial veins on the surface of subserous fibroid in the ultrasonography report will help gynaecologists to counsel the patient about likelihood of this complication in future. Prophylactic myomectomy or hysterectomy can avoid this abdominal emergency due to hemoperitoneum. In the absence of prior diagnosis, emergency surgical intervention is advocated to confirm the diagnosis and arrest hemorrhage.[6-10]

4. Conclusion

Rupture of veins on the surface of the subserosal fiboid result in severe intra-peritoneal haemorrhage requiring urgent intervention. There is slow deterioration in patients condition unlike that of ruptured ectopic as the bleeding is venous in origin. Possibility of rupture of veins on the surface of the fibroid must be thought, whenever a middle aged woman with pelvic mass presents with hemo-peritoneum. Ultra-sonography with colour doppler helps in confirmation of diagnosis in majority of cases.

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References

1. Lotterman S. Massive hemoperitoneum resulting from spontaneous rupture of uterine leiomyoma. *Am J Emerg Med*. 2008 Oct; 26(8):974.e1-2. doi: 10.1016/j.ajem.2008.02.029.
2. Shapira A, Stars A. Massive intraperitoneal hemorrhage from ruptured subserous veins on the surface of uterine fibroid. *N Engl J Med.*1932; 207:827-829.
3. Akahira J, Ito K, Nakamura R, Yajima A. Massive intraperitoneal hemorrhage and hypovolemic shock due to rupture of a coronary vessel of a uterine leiomyoma: a report of two cases. *Tohoku J Exp Med.* 1998; 185(3):217-22.
4. Dahan MH, Ahmadi R. Spontaneous subserosal venous ruptures overlying a uterine leiomyoma. A case report. *J Reprod Med*. 2002 May; 47(5):419-20.
5. Sakhri J, Bakir D, Sabri Y, Ammara H. Hemoperitoneum secondary to the rupture of superficial veins of a uterine leiomyoma. *Gynecol Obstet Fertil*. 2002; (2):133-5.
6. Horowitz E, Dekel A, Feldberg D, Rabinerson D. Massive hemoperitoneum due to rupture of an artery overlying a uterine leiomyoma: a case report. *Acta Obstet Gynecol Scand* 2005 Apr; 84(4):408-9.
7. Lenczewski A, Jaworski S, Acute internal hemorrhage caused by a ruptured vein in a uterine myoma. *Wiad Lek*. 1981; 34(7):609-10.
8. Danikas D, Theodorou SJ, Kotrotsios J, Sills C, Cordero PE. Hemoperitoneum from spontaneous bleeding of a uterine leiomyoma: A case report. *Am Surg*. 1999; 65(12):1180-2.
9. Hasskarl WF. Intraperitoneal hemorrhage from the coronary vessels of a uterine leiomyoma. *Proc Staff Meet Mayo Clin*. 1949; 24(8):207-11.
10. Bangal V B, Shinde K K, Gavhane S P, Ghorpade N, Gupta K and Gangapurwala S. Massive hemo-peritoneum due to rupture of surface veins of a uterine leiomyoma. *International Journal of Biomedical and Advance Research*. 2014; 05 (02):128-30