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Laceration of Veins of Subserous Uterine Fibroid Presenting as Haemoperitoneum - A Case Report.

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ABSTRACT

Laceration of veins on the surface of subserous uterine fibroid is an extremely uncommon gynaecological cause of hemoperitoneum. It is a life-threatening emergency. We report a case of massive hemoperitoneum due to laceration of veins on the surface of subserous uterine fibroid. The patient underwent laparotomy with suturing of lacerated vessels with 3-0 catgut. She received totally 4 units of packed cells & 2 units of FFP transfusion and had a smooth postoperative period. A differential diagnosis of laceration of surface vessel of fibroid should be considered, while dealing with a case of hemoperitoneum with pelvic mass.

Keywords: Subserous uterine fibroid, Hemoperitoneum, Gynaecological emergency

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INTRODUCTION

Uterine leiomyomas (fibroids) are the most common pelvic tumors affecting females in the fertile age group[1]. These benign tumors are hormone-dependent, responding to both estrogen and progesterone; they often increase in size during pregnancy and usually decrease in size after menopause[2]. Acute complications of fibroids are rarely seen but may be serious. Spontaneous hemoperitoneum due to laceration / bleeding from surface vessels of uterine fibroid is rare cause. In most cases, bleeding is a result of trauma or torsion. Spontaneous rupture of a superficial vein of fibroid is extremely very rare [3]. It is a life threatening emergency. Fewer than 100 cases have been reported.

CASE REPORT

Thirty eight year old multiparous woman (P2L2) , sterilized with last child birth-8 yrs back presented to OBG department of Sree balaji medical college & hospital, Chennai with pain in upper abdomen, giddiness, and two episodes of vomiting. Menstrual cycles were regular and had no menstrual complaints in the past. She had two full term normal deliveries in the past and had undergone sterilization operation. She had complaints of pain in abdomen for two to three hours. There was no other medical or surgical illness in the past.

Patient was conscious, oriented, afebrile. She had severe pallor. No pedal edema, Her pulse rate was 100 /minute, regular, low volume. Her blood pressure was 90/60 mm Hg. There was no icterus or thyroid enlargement. Her body mass index was 33. She had distension of abdomen, rigidity and guarding. Per speculum examination revealed normal findings. Per vaginal examination revealed normal sized mobile retroverted uterus, fornices free, with minimal bleeding PV. There was no palpable adnexal pathology. Uterine movements were tender. Her haematological and biochemical investigations revealed that her Haemoglobin was - 7.3 gms%, Total Leucocyte Count-11880/cumm., Differential Leucocyte Count showed metaband - 4%, neutrophils - 79% , lymphocytes -12% , monocytes- 5 % , eosinophils- 0.1 % platelet count - 2,39,000 lac /cumm , Packed cell volume - 28%, S. Uric acid - 6.3mg%, S. Bilirubin total -1.0mg%, Conjugated- 0.30mg%, Blood Urea- 20.3mg% , S, Creatinine 0.6mg%, S.Na 142M.eq/L, S.K 3.6 meq/L, S. LDH -528 IU/L, Serum amylase -59 IU/L, Prothrombin time- test 12.4 sec. Control -13.1 sec., APTT-test 28.2 sec. Control -31.8sec, INR- 0.94, Blood group and Rh type -B Positive, Bleeding time 1 min 30 sec, Clotting time - 5 mins. Blood sugar (random)-145mg/dl. Ultra-sonography of abdomen and pelvis revealed a bulky uterus (10cmx5cmx5cm) with fibroid, both ovaries-normal "**Figure-1**". There was gross collection of fluid in peri-hepatic area, Morissons pouch and paracolic gutter suggestive of hemoperitoneum "**Figure-2**". Patient and relatives were counselled about the need for exploratory laparotomy. High risk consent was obtained from the relatives. Abdomen was opened by midline incision. The peritoneal cavity was full of blood and blood clots. After removal of blood clots from pelvic region, uterus and fibroid could be visualized clearly. Per op findings: a) 2 litres of hemoperitoneum, b) about 600 grams of blood clot evacuated, c) uterus bulky, a sessile 6*5cm subserosal fibroid over the fundus of uterus with multiple subserosal veins on its surface, both tubes – normal "**Figure-3**". evidence of sterilization on both sides +, both ovaries - normal. d) one of the veins were lacerated and was actively oozing over the subserosal fibroid which was sutured with 3-0 catgut to secure hemostasis "**Figure-4**". Here patient was not done hysterectomy, and abdominal cavity was explored for any additional pathology and after thorough wash two drain kept in Morrison pouch and pelvic pouch. Rectus sheath closed with 1-0 prolene , and wound closed in layers. . Patient was hemo-dynamically stable during surgery. She was transfused with two units of packed cells, two units of FFP. Patient had smooth post operative period. Another two units of blood were transfused on first post operative day. She was kept in hospital for ten days.



Figure 1 - USG picture suggestive of subserous uterine fibroid in the fundus

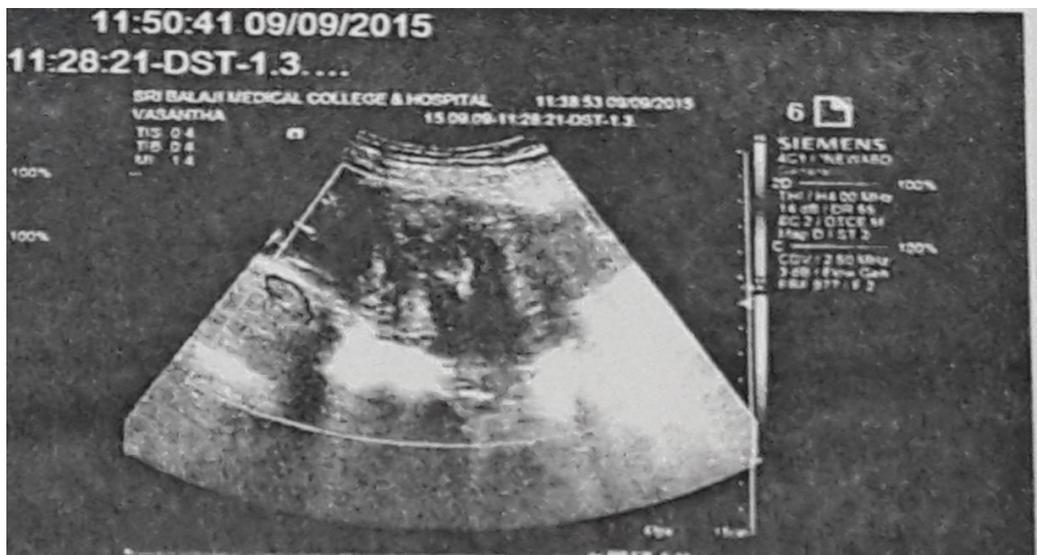


Figure 2- USG picture suggestive of hemoperitoneum

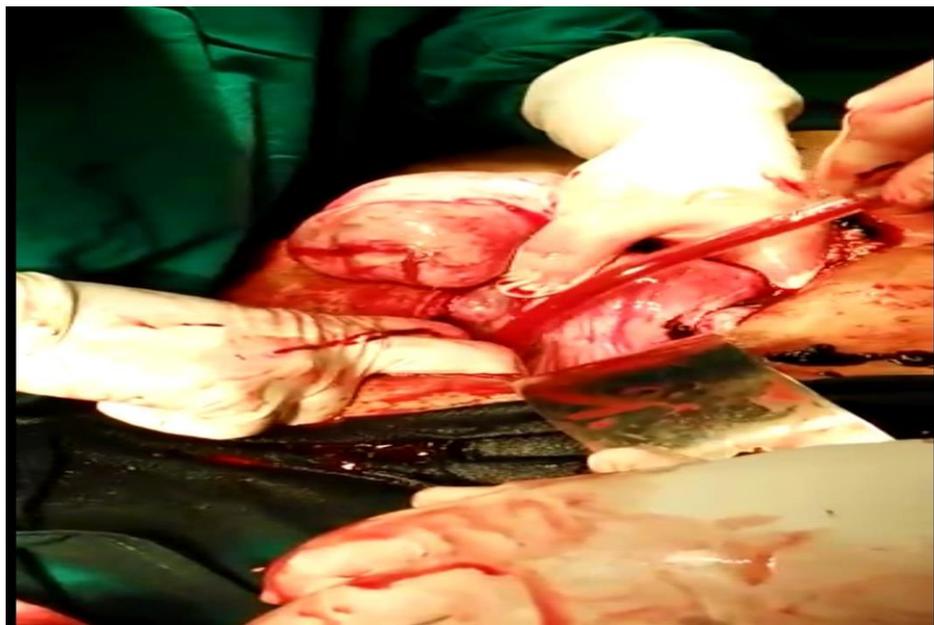


Figure 3- uterus bulky, a sessile 6*5cm subserosal fibroid over fundus of uterus



Figure 4 - one of the veins were lacerated and was actively oozing over the subserosal fibroid which was sutured with 3-0 catgut to secure hemostasis

DISCUSSION

Fibroid of the uterus is the commonest benign tumour seen in women of reproductive age[4]. They may be intramural, subserosal, or submucosal in location[1]. Subserosal leiomyomas may remain beneath the uterine surface or exophytic or pedunculated. Submucosal leiomyomas may sometimes protrude into the uterine cavity and may also become pedunculated. Subserous fibroids are known for complications like torsion of pedicle and detachment from parent uterus forming wandering fibroid and sarcomatous degeneration[5]. Rupture of surface veins of subserous fibroid causing severe intraperitoneal bleeding is rare [6]. 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 subserous fibroid are abdominal trauma, sudden exertion, straining and erosion of vessel by friction or pressure of the tumour against sacral promontory [9,13]. 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 [5,9,10]. 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 [7]. The bleeding is likely to occur from torn enlarged veins coursing over the surface of subserous leiomyomas, resulting in hemoperitoneum and hypovolemic shock [4]. Ultrasound is often the initial diagnostic imaging modality for suspected complications of fibroids. A simple fibroid is usually seen as a hypoechoic lesion that may be well-defined and arising within the surrounding myometrium. Degeneration of fibroids gives a more complex ultrasound appearance with areas of cystic change and Doppler can show circumferential vascularity. Fibroids that are torsed or are necrotic will show absence of flow on Doppler ultrasound[1]. CT is not the primary modality for diagnosing or evaluating fibroids; however, fibroids are often found incidentally at CT. Therefore, familiarity with their various CT appearances is important.. The typical finding is a bulky, irregular uterus, or a mass in continuity with the uterus. Magnetic resonance imaging is highly accurate in evaluating leiomyoma size, number, location, 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. 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 lacerated surface vessels of

fibroid[8,9]. Management is both surgical and supportive. Intravenous fluids and blood should be infused for significant blood loss. The definitive treatment is surgical, requiring vessel repair and/or myomectomy[3]. Alternative to surgery, percutaneous embolization of uterine artery has become established treatment for non acute uterine hemorrhage. It is minimally invasive and also maintain patient's fertility. So we conclude that patients usually present to emergency department with features of acute abdomen with hemorrhagic shock need an urgent surgical intervention to take care of the problem[9,10,11,12].

CONCLUSION

Rupture of veins on the surface of the subserosal fibroid 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 middleaged woman with pelvic mass presents with hemo-peritoneum. Ultra-sonography with colour Doppler helps In confirmation in majority of cases.

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