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Case Report

A case of ruptured splenic artery aneurysm in pregnancy: a rare presentation

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ABSTRACT

Rupture of a splenic artery aneurysm (SAA) is a rare condition that occurs predominantly in pregnancy. It is associated with a maternal mortality rate of 75% and fetal mortality rate of 95%. The majority ruptured spontaneously. Most cases are not diagnosed until surgery following rupture. Ruptured SAA should be considered in the differential diagnosis of a pregnant patient with severe and unexplained abdominal pain.

Keywords: Splenic artery aneurysm, Massive hemoperitoneum, Splenectomy

INTRODUCTION

Rupture of a splenic artery aneurysm (SAA) is a rare condition that occur predominantly in pregnancy. It is associated with increased maternal and fetal mortality.¹ We reported a case of ruptured splenic artery aneurysm during the third trimester of pregnancy with maternal survival.²

CASE REPORT

We received a case of a 32 years old G3P2L1 with previous 2 caesarean section at 35 weeks of gestational age in casualty whose chief complaints were lower abdominal pain and decreased perception of fetal movements for one day. There was no history of bleeding per vaginum. There was no evidence of involuntary guarding and an absence of rebound tenderness.

On eliciting detailed history, she was found to have massive splenomegaly of 19 cm size in antenatal period for which she had no proper follow up in a tertiary care centre. On receiving, patient was severely anemic with tachycardia with a pulse rate of 132 per minute and a BP of 90/60 mmHg. Patient was conscious and oriented. Immediately ultrasonography was done. It revealed free

fluid in peritoneal cavity with absent fetal heart rate with no evidence of RP clots. In view of massive hemoperitoneum, she was suspected to have ruptured uterus and hence patient was taken up for emergency laparotomy. Intra-operatively she was found to have massive hemoperitoneum of 1.5 l with 500 g of clots. Laparotomy proceeded to deliver a dead born male baby of birth weight 1.9 kg. Uterine wound closed and the same contracted well. Since there was an uncontrolled bleeding, abdominal packs were kept to control the bleeding and identify the source of bleeding. The packs were removed from the pelvis in a stepwise fashion.

The uterus and the accompanying pelvic structures were intact and were not the source of haemorrhage. Upon removing the packs from the upper abdomen, brisk bleeding was encountered following removal of packs in the left upper quadrant. An intra-operative consultation was obtained from a general surgeon who extended the midline incision upto the xiphoid. Bleeding was identified to be from a ruptured splenic artery aneurysm. On attempting to ligate the vessel, bleeding was not controlled. Hence surgeon proceeded to splenectomy. Intra-operatively one unit of packed red blood cell, four units of fresh frozen plasma and four units of platelet were transfused. She was transferred to the intensive care unit

after the surgical procedure. Post-operatively, broad spectrum antibiotics were administered empirically for 6 days. Pneumococcal vaccination was given. She was discharged home in a stable condition on day 20.

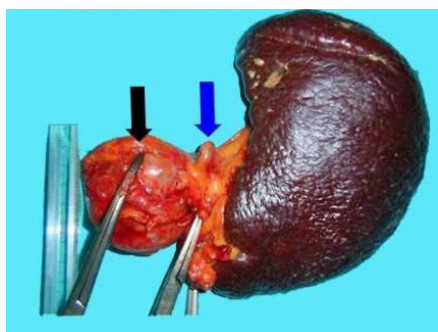


Figure 1: Post-operative specimen.

DISCUSSION

SAA is an uncommon condition that occurs four times more frequently in women compared to men. Other risk factors include portal hypertension, congenital abnormalities of the vessels, inherited vascular and connective tissue disorders, vascular trauma, inflammatory processes, and degenerative arterial disease.³ SAA is associated with pregnancy and the risk increases with increasing parity. Hormonal and physiologic changes have been proposed to explain the increased incidence of SAA in pregnancy. The physical signs of a rupture most often include sudden and intense abdominal pain, most commonly in the left upper quadrant or epigastric. SAA rupture in pregnancy is difficult to diagnose since its symptoms mimic other obstetric and surgical emergencies. Approximately, 70% of cases of SAA rupture during pregnancy are misdiagnosed as uterine rupture.⁴ In the setting of a ruptured SAA, ultrasound will show free fluid in the abdomen, and the diagnosis is confirmed at the time of emergent laparotomy.⁵ Obstetricians and other emergency providers should consider a ruptured SAA in any pregnant woman who presents with an acute surgical abdomen. Prompt recognition and emergent laparotomy along with the availability of general or vascular surgery consultants are paramount to both maternal and fetal survival. In the rare minority of women of childbearing age who are discovered to have an asymptomatic SAA prior to rupture, a proactive

approach to management should be undertaken due to the high risk of rupture in pregnancy.⁶

CONCLUSION

Approximately 95% of splenic artery aneurysm rupture occurs during pregnancy, mostly in third trimester. If a woman has an existing SAA, the risk of rupture during pregnancy is 20-50%. Though the rupture of a SAA during pregnancy is rare event, it carries a high risk of maternal and fetal mortality. The mortality in the general population when a SAA ruptures is 25%. In pregnant women, this rate increases to a 75% maternal mortality rate and a 95% fetal mortality rate. The mortality of SAA rupture is high in pregnancy as compared to general population. Hence early intervention by a multidisciplinary surgical team is key to preserving the life of mother and fetus.

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