Splenic artery aneurysm rupture

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Abstract

Splenic artery aneurysm rupture is a rare but a serious complication especially when it occurs in pregnancy. Following is a case report of splenic artery aneurysm rupture in a primigravida woman who presented with a life threatening haemorrhage.

CASE REPORT

A 23 year old primigravida women who was 23 weeks pregnant presented to A&E with acute abdominal pain. Initial suspicion was abruptio placentae. She had no per vaginal bleeding. She was tachycardic with a heart rate of 110 per minute with a normal blood pressure. She was referred to the Obstetricians, who admitted her to labour ward. Her abdomen was soft on examination with some epigastric tenderness. She had no per vaginal bleeding and remained haemodynamically stable. Diagnosis was unclear. She was observed in the labour ward and was referred to the general surgeons to rule out non obstetric causes of abdominal pain. An ultrasound scan performed showed a viable foetus with no other obvious findings. Her blood results showed a haemoglobin of 12gm/dl and biochemistry showed normal renal and liver function. She was offered morphine for her analgesia and remained stable for the next one hour. Over the course of the next hour she gradually became unwell with increasing abdominal pain. She became increasingly tachycardic and pale. She was referred to the surgeons on clinical suspicion of intra-abdominal bleeding.

She was very pale, tachycardic and hypotensive. Two intravenous cannulae 14 and 16 gauge were inserted and warm crystalloid were administered. In the next ten minutes she became increasingly pale cold and clammy and tachycardic with a heart rate of 140 per minute with feeble brachial pulse and un-recordable blood pressure.

Obstetricians decided to transfer her to theatre immediately for laparotomy and surgeons were informed.

General anaesthesia was commenced in theatre with the surgeons and obstetricians Scrubbed. Anaesthesia was induced with 75mg of ketamine and 75 mg of suxxamethonium. Level one rapid fluid infuser was in place and blood products were available. Trachea was intubated and invasive arterial blood pressure monitoring was established. When the abdomen was opened she had a huge amount of blood in the peritoneum with active bleeding. Source of the bleeding was difficult to establish initially. After packing and further exploration a ruptured splenic artery aneurysm was found. She had a splenectomy. Intra-operatively, estimated blood loss was around 5 litres and she received a massive transfusion of packed cells, fresh frozen plasma and platelets. Towards the end of the surgery she was hypothermic with a temperature of 35.1 Celsius and had significant metabolic acidosis with pH of 7.21 and base excess of – 9.2.

Her haemoglobin was 8.9. She was transferred to the intensive care unit for further management. She was ventilated overnight during which time her fluid status and acid base status were optimised.

She was extubated the following day and received PCA morphine for analgesia. Ultrasonography confirmed the there was no foetal heart rate. She was discharged from the intensive care unit the following day. She had induction for termination of her non viable foetus. She received epidural analgesia for her analgesia. She was discharged form hospital 24 hours after delivery.

DISCUSSION

Maternal and foetal mortality of spontaneous rupture of a splenic artery aneurysm during pregnancy has been reported to be 75 and 95%, respectively[12] . It has been postulated that increased splenic artery blood flow and altered level of reproductive hormones affecting the elasticity of vascular tissues contribute to the rupture of splenic artery aneurysms pregnancy. Clinical presentation is often non-specific with rapid deterioration. Shock may be the initial presenting

symptom.

Because of absent premonitory symptoms and signs in splanchnic arterial aneurysms, clinicians rarely recognize the condition preoperatively in spite of increasing reliance on abdominal ultrasonography, MRI or CT scan.

Accordingly, rupture of a splenic artery aneurysm typically presents as sudden, unexpected obtundation or death[3]. Hence, if diagnosed before pregnancy, younger women need obliteration of the aneurysm before catastrophic rupture occurs during pregnancy and labour. It is emphasized that the chances of survival of the patient and the foetus depend considerably on early detection and rapid surgical intervention[4].

A pregnant woman who goes into shock without evidence of vaginal bleeding should be presumed to be bleeding internally and should undergo emergent laparotomy.

This case shows that ruptured splenic artery aneurysm should be considered in the differential diagnosis of haemoperitoneum in a pregnant woman. Rapid surgical intervention is needed to ensure both maternal and foetal survival.

CONCLUSION

This case illustrates the need to consider ruptured splenic artery aneurysm as part of differential diagnosis of haemoperitoneum in pregnant women. Immediate surgical intervention is needed to ensure survival of both mother and foetus.

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