CASE REPORT

Uterine Artery Bleeding and Haemoperitoneum During the Second Trimester in Pregnancy

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Summary

A case of spontaneous rupture of uterine artery in the second trimester of pregnancy is described. Haemorrhage from rupture of uterine artery during pregnancy was discovered at laparotomy. This was an unusual but serious complication of pregnancy. This condition is extremely rare and one must consider it in cases of incomprehensible abdominal pain with or without haemodynamic collapse. A review of the literature revealed only four similar cases so far. This pregnancy continued till 37 weeks pregnancy and had a spontaneous vaginal delivery. Immediate institution of effective resuscitative measures and early surgical intervention were essential to both foetal and maternal survival.

Key Words: Uterine artery rupture, Pregnancy, Haemoperitoneum

Case Report

A 37 year old multi-gravid in her fifth pregnancy was admitted at 21 weeks for abdominal pain of unknown cause. The pain started three days prior to admission originating from the supra pubic area extending to the epigastrium and became generalized at the time of admission. The intensity of the pain increased with respiratory movements. The fetal movements were normal and there was no pre term uterine contraction. No symptom of nausea, vomiting or diarrhoea was present. There was history of gastritis for which she was on antacids. Her past four pregnancies and deliveries were uneventful.

Upon admission, the patient appeared acutely distressed, pale with a painful abdomen. Temperature was normal, blood pressure was 90/60 mm of Hg and pulse was 100 beats per minute. The uterine size corresponded to the gestational age. A vaginal examination was unremarkable. There were no echogenic signs of placental abruption. The biometry findings of the fetus were consistent with the gestational age. Further sonographic examination of the abdomen showed normal liver and spleen. Free fluid was present in the peritoneal cavity. At this point a differential diagnosis of a concealed placental abruption, torsion of the uterus or perforated stomach was made.

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The patient was resuscitated and a laporotomy was carried out. Three litres of blood was found in the peritoneal cavity. The source of bleeding was identified after a meticulous examination of the pelvic area, which revealed a left broad ligament haematoma. Upon opening, brisk bleeding from the left ascending branch of the uterine artery was seen via the round ligament. The uterine artery was double ligated after the ureter was identified. Good haemostasis was secured. The patient made an unremarkable recovery after three units of blood was transfused. She was discharged on the fifth day with advice to follow-up at our institution. The subsequent antenatal visits were normal. She went into spontaneous labour and vaginal delivery at 37 completed weeks to a baby boy, birth weight 2.3kg. The puerperium was uneventful.

Discussion

Intra-abdominal haemorrhage from a ruptured uterine artery is very rare and can be a dramatic clinical catastrophe. The precise pre-operative diagnosis of the condition is often difficult as there is no specific symptom or diagnostic sonographic marker pertaining to this condition. The diagnosis is often made intra-operatively. The differential diagnosis includes: placental abruption, torsion of gravid uterus, rupture of utero-ovarian vessels, ruptured uterus, abdominal pregnancy, perforated appendix or rupture of splenic or hepatic artery aneurysm.

Kuppuvelumani[1] et al reported a similar event in a rupture of the right uterine vein at 37 weeks gestation. Steinberg [2] on the other hand reported rupture of the left uterine artery at a similar gestation and both patients had lower uterine segment caesarean section. Hodgkinson and Christenson[3] in 1950 reported an overall maternal mortality rate of 49%. Ginsburg et al[4] in 1987 reported one maternal death in 28 cases reviewed between 1950-1985.

The aetiology of an arterial rupture in pregnancy remains unclear. Davidsen et al[5] attributed to congenital arteriovenous malformation, arterial degeneration and inflammatory processes. Hodgkinson and Christensen[4] alluded to varicosity of the uterine vein leading to rupture in pregnancy. Angiography to localize the site of haemorrhage in impending obstetric-shock patient is not advocated as this may only delay the intervention and control of bleeding. Furthermore, this investigative and interventional expertise is not available at all tertiary centres in Malaysia.

Pre-operative resuscitation and transfusion of colloids or blood is important initial management irrespective of the period of gestation. Unlike other reported cases, this patient presented with signs of hypovolaemia and abdominal pain at 21 weeks gestation and immediate surgical intervention was undertaken. Fortunately, we were able to salvage both the patient and the pregnancy to achieve a delivery at term.

References

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