

A Rare Life Threatening Case Report “Spontaneous haemoperitoneum in 3rd trimester Pregnancy”

Hamida Begum^{1*}, K Nahar², MT Khairi³, Ashrafi, F.,⁴ Hasbullani Zakaria,⁵ Nuraini Che Aziz,⁶

¹Prof of Ob & Gynae, Widad University College, Kuantan, Pahang, Malaysia

²Associate Professor, Deptt of O & G, Bangobandhu Sheikh Mujib Medical University, Bangladesh

³Associate Professor, Widad University College, Malaysia

⁴Specialist, Ob & Gynae, Brisbane, Queensland, Australia

⁵Biochemistry Department, Widad University College, Kuantan, Pahang, Malaysia

⁶Kulliyyah of Dentistry, International Islamic University, Kuantan, Pahang, Malaysia

****Corresponding Author: hamida@widad.edu.my***

Abstract

Spontaneous haemoperitoneum (SHiP) in pregnancy is very rare and always lethal specially in 3rd trimester of pregnancy that demands prompt diagnosis and urgent intervention to save both mother and baby, thereby to prevent maternal and perinatal mortality and morbidity. A 30 years old, G4 P2+1 at her 34 weeks of pregnancy came to accident and emergency with acute abdomen and features of hypovolemic shock mimicking abruption placenta. Immediate resuscitation by volume replacement and emergency laparotomy followed by lower uterine caesarean section done. An asphyxiated 2.5 kg male baby delivered and after through exploration one of the multiple engorged superficial vessels on posterior surface of uterus was found actively bleeding amounting about 1.8-2 L, which was then sutured and haemostasis maintained. Post-operative period was uneventful.

Keywords : SHiP- Spontaneous Haemoperitoneum in Pregnancy.

Introduction

Haemoperitoneum during pregnancy is very rare but always very serious with potential life threatening complications which is highly associated with adverse pregnancy outcome. SHiP may develop from rupture of various abdominal and pelvic structures including spleen, uterus, uterine vessels, ovarian vessels or pelvic endometrial implants or even after controlled ovarian hyperstimulation and embryo transfer(COH-ET). It mimics placental abruption in many ways like acute abdominal pain, peritonitis, shock and or fetal distress but differs that patient has no history of hypertension 1. Appropriate volume replacement and immediate surgical intervention provides best prognosis. Here, a case of SHiP in 3rd trimester of pregnancy is discussed. The objective of this case report is to share this clinical entity to all so that this type of rare but acute surgical case can be successfully diagnosed and managed . SHiP is an unprovoked and non traumatic intra-peritoneal bleeding highly associated with adverse pregnancy outcomes.

Case Report

A 30 years old , G4 P2+1, housewife was admitted in Medical College Hospital, Bangladesh at 34 weeks of pregnancy with acute pain in abdomen for few hours without any H/O trauma. She was not in any antenatal check up and had no history of caesarean section. On examination, she was severely anaemic with blood pressure 90/50, Pulse 112/mi, abdomen tense tender with symphysio-fundal height 34 cm. Fetal heart sound could not be elicited due to tenderness and rigidity of abdomen. On per vaginal examination, cervical os was found closed and there was no vaginal bleeding. Portable ultrasound scan showed viable intra-uterine baby with free fluid in peritoneal cavity. As the haemodynamic condition of the patient was gradually deteriorating emergency exploratory laparotomy done with clinical impression of abruption placenta. On opening, abdomen was found to be full of free blood (almost 2L) simulating ruptured uterus though there was no history of labour pain or previous caesarean section which might lead rupture. During removal of huge amount of blood uterus was thoroughly palpated to exclude any ruptured site. As the uterus was found to be intact it was very quickly opened by lower uterine transverse incision, an alive asphyxiated male baby of 2.5 kg was delivered. After closure of uterine incision all the susceptible abdominal (liver,Spleen,vessels) and pelvic organs were checked to find out the source of bleeding. During through exploration multiple tortuous engorged superficial vessels were found on the posterior surface of the lower segment of uterus, one of which was actively bleeding. The bleeding vessel was secured by simple mattress suture. Then after proper tioleting abdomen was closed in layers. Total 3 units of whole human blood was transfused during operation. The patient had a good post- operative recovery, she went back home with baby at 6th post- operative day.

Discussion

Hemoperitoneum, a life threatening condition may occur in anybody anytime following severe abdominal trauma causing laceration of any vessel specially if there is varicosity or aneurysm. It is quiet common during early pregnancy, the major cause of which is ruptured ectopic pregnancy. But spontaneous hemoperitoneum during 2nd or 3rd trimester of pregnancy is very rare. In primary care setting based on Murtagh's diagnostic strategy serious disorders not to be missed in acute abdomen during pregnancy, placental abruption is one of the diagnosis. Hamoperitoneum during pregnancy could be consider as probability diagnosis although it is a rare condition. Review of literature reveals very few number of such cases. Two cases were reported by Thanapan Choobun MD et.al. where intra-abdominal bleeding was due to rupture of ovarian venous plexus during 2nd & 3rd trimester of pregnancy¹. One case had repeated bleeding at 24 and 31 weeks of pregnancy. Emergency exploratory laparotomy and suturing were done in both the cases, with caesarean section in one case. Primary diagnosis of ruptured utero-ovarian vessel is rare. The pre-operative diagnosis is usually placental abruption in a significant number of cases (26%)². In literature review utero-ovarian vessel rupture has been reported to be usual in 3rd trimester but has been shown to occur in all trimesters and even in puerperium³. Uterine arterio- venous malformation is a rare condition, the spontaneous rupture of this was reported by Simpson et.al. as a cause of an acute abdomen in late pregnancy⁴. An atypical case of subacute uterine artery rupture was reported in a 28 years old nulliparous lady with sickle cell anaemia at 27 weeks pregnancy by Fiori O et.al. which was successfully treated by selective suture after laparotomy⁴. Aziz U et. al. reported a case of hemoperitoneum at 20 weeks of gestation resulting from spontaneous rupture of left uterine vessels associated with decidualized endometriosis⁵. A case of spontaneous hemoperitoneum was also reported occurring four hours after vaginal delivery, where bleeding was due to avulsion of a fibrous band between the right fallopian tube and uterus. An almost similar to our patient another case was reported by Wu CY et. al. where source of bleeding was a ruptured superficial vein located on the posterior surface of the uterus⁵. That patient was a 31 years old nullipara, presented at 32 weeks and was on tocolytic drugs. The clinical features led to an impression of abruptio placenta and emergency caesarean section performed, internal bleeding was about 3 L. After thorough exploration the bleeder was identified and sutured. Maternal and fetal outcome was good. A study of 25 cases of SHiP over 20 years revealed 94.9% patients presented with acute abdominal pain whereas hypovolemic shock and signs of fetal distress were 47.5% and 40.7% respectively. Imaging confirmed free peritoneal fluid in 89.2% and during laparotomy active bleeding was 91.1% cases, median amount of haemorrhagic fluid was 1600ml (1000-2500 ml). Our patient had abdominal pain, features of hypovolemic shock and also evidence of fetal distress as well. Origin of bleeding ruptured superficial veins on posterior surface of uterus and the amount of bleeding was about 2 litre. There was no maternal and perinatal mortality in our case though the incidence in the study maternal and perinatal mortality was 1.7% and 26.9% respectively.

Pathogenesis of SHiP is obscure. Physiological increase in blood flow to the utero-ovarian vessels may cause dilatation of these plexuses and predispose to spontaneous rupture. The sudden increase in intravenous pressure associated with increased intra-abdominal pressure can also cause rupture^{3,5}. Principle of management includes immediate resuscitation and exploratory laparotomy. At first, the bleeding point must be tried to be found out by meticulous

manipulation of uterus and other organs to ligate it. If the uterus is found too large to manipulate, prompt caesarean section should be performed like our case so that the bleeding site can easily be detected. If no pelvic pathology is found, other important vulnerable vessels like splenic, hepatic, renal or any aneurysmal vessel should be inspected.

Conclusion

Although very rare, obstetricians should be aware of the causes of acute abdominal pain and hypovolumic shock in pregnancy specially in last trimester. Close observation, prompt diagnosis and proper intervention are the keys to patient survival. The use of sophisticated techniques

of anaesthesia and volume replacement as well as modern advanced neonatal care has tremendous role in improved maternal and fetal outcome. As currently no preventive measures are available so awareness and recognition of SHiP is crucial to improve pregnancy outcome. With advancement in antenatal and intrapartum care the maternal and perinatal survival in improved manifold.

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