preterm severe preeclampsia with sudden onset of concealed placental abruption on a background of cervical cerclage

Case

a pregnant lady at her early 30s G4P2-1 at 34+4 weeks of gestation presented overnight to our birth suite with sudden onset of severely distressing epigastric pain. She was not able to lie down in bed. We started managing her pain to be able to assess her. Despite of parenteral opioids, the patient remained in acute pain. A MET call was done to help diagnosing and managing the pain. Two wide bore cannulas and basic blood tests including lipase and troponin were done. ECG was done and acute cardiac issues were excluded. A bed-side formal US scan was done urgently, and no clear cause was found. She was commenced on labetalol 100mg twice a day for gestational hypertension diagnosed two weeks ago. She had a severely growth restricted fetus on growth scan. Her blood pressure at MET call was 190/120 and her epigastric area was severely tender with tense uterus and abdominal muscles guarding. There was no vaginal bleeding. Electronic fetal monitoring was normal. The consultant on call was contacted for most likely placental abruption. Her blood pressure was controlled with hydralazine boluses and CAT1 CS was performed, and the cervical cerclage was removed. placental abruption was evident. The paediatric team looked after the preterm baby who was in a good condition at birth. Her blood tests came back with deranged liver enzymes and renal function and mildly low platelets. Her urine protein/creatinine ration was high. Her blood pressure post CS was high. Labetalol dose was increased and MgSo4 was commenced. She had cervical cerclage in her last two pregnancies as her first pregnancy ended up in a preterm labour at 21 weeks. She had elective CS in her second pregnancy for a breech- presenting fetus.

Discussion

Placental abruption is defined as the premature separation of the placenta from the decidua at or after 20 weeks gestation. acute abruption classically presents with the abrupt onset of vaginal bleeding, mild to moderate abdominal pain, and uterine contractions. In my case, the cerclage could have concealed the bleeding. Hypertension is one of the main risk factors; Antihypertensive therapy appears to reduce the risk of abruption, probably because of reducing hydrostatic pressure and spiral arterial wall damage accruing from severe hypertension [1]. Other risk factors that my patient had were severely growth-restricted fetus [2], prior cesarean birth [3] and short maternal stature.[4]. Cesarean birth is the best mode of delivery when vaginal birth is not imminent to minimize the risk of fetal demise, significant coagulopathy (ie, DIC), maternal shock and death. Coagulation defects appear to develop rapidly, within a few hours or even in minutes of the abruption [5] and The fibrinogen level is the test that correlates best with severity of bleeding [6]. During the acute phase of abruption, the blood is isoechoic or similar to the surrounding placental tissue. Thus, it can be difficult to differentiate a concealed hemorrhage from the surrounding placental tissue on US scan. Acute abruption is considered a clinical rather than a histologic diagnosis. Only 30 to 50 percent of acute abruptions with vaginal bleeding are associated with diagnostic histologic findings [7,8].

References

1. Bellos I, Pergialiotis V, Papapanagiotou A, et al. Comparative efficacy and safety of oral antihypertensive agents in pregnant women with chronic hypertension: a network metaanalysis. Am J Obstet Gynecol 2020; 223:525.

2 . Riihimäki O, Metsäranta M, Ritvanen A, et al. Increased prevalence of major congenital anomalies in births with placental abruption. Obstet Gynecol 2013; 122:268.

3. Jackson S, Fleege L, Fridman M, et al. Morbidity following primary cesarean delivery in the Danish National Birth Cohort. Am J Obstet Gynecol 2012; 206:139.e1.

4. Ogawa K, Morisaki N, Saito S, et al. Association of Shorter Height with Increased Risk of Ischaemic Placental Disease. Paediatr Perinat Epidemiol 2017; 31:198.

5. Pacheco LD, Saade GR, Costantine MM, et al. An update on the use of massive transfusion protocols in obstetrics. Am J Obstet Gynecol 2016; 214:340.

6. de Lloyd L, Bovington R, Kaye A, et al. Standard haemostatic tests following major obstetric haemorrhage. Int J Obstet Anesth 2011; 20:135.

7. Elsasser DA, Ananth CV, Prasad V, et al. Diagnosis of placental abruption: relationship between clinical and histopathological findings. Eur J Obstet Gynecol Reprod Biol 2010; 148:125.

8. Chen AL, Goldfarb IT, Scourtas AO, Roberts DJ. The histologic evolution of revealed, acute abruptions. Hum Pathol 2017; 67:187.