Postpartum HELLP syndrome after a normotensive pregnancy.

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SUMMARY

Severe pre-eclampsia, associated with HELLP syndrome, can occur after a normal delivery and birth in a woman whose blood pressure has remained normal throughout the antenatal period. Although rare, the syndrome can lead to pulmonary oedema or renal failure, and should be borne in mind when a woman develops epigastric or right upper-quadrant pain after a normal pregnancy and delivery. A significant fall in the platelet count in the antenatal period may be a useful indicator of risk.

Keywords: HELLP syndrome; postpartum complications; haemolytic disease; obstetrics.

Introduction

HELLP syndrome is a rare obstetric problem characterized by haemolysis, elevated liver enzymes, and low platelet count. Only about one in 22 000 women with normal blood pressure antenatally would be expected to develop the syndrome. In this case report, the authors recount a particular case to remind practitioners of the unusual manner in which some problems may present.

Case report

A 34-year-old woman had an uneventful second pregnancy, during which her blood pressure was never recorded as being greater than 120/80 mmHg. Routine urinanalysis had shown a trace of protein at 32 and 40 weeks' gestation, but was otherwise normal. The woman went into spontaneous labour at term and had a normal vaginal delivery of a son weighing 3480 g. The delivery was followed by a postpartum haemorrhage with an estimated blood loss of 1100 mls, thought to be due to uterine atony. This was treated by an intramuscular injection of 1 ml Syntometrine followed by an intravenous infusion of normal saline containing 20 units of Oxytocin.

During labour, the woman's blood pressure stayed below 140/80 mmHg, but immediately after delivery it rose to 160/90 mmHg. Six hours after delivery, the woman developed epigastric pain with tenderness to palpation on the right hypochondrium, hyperreflexia (but no clonus), and proteinuria ++. Her blood pressure was recorded as 200/105 mmHg at that time, and she was treated with an intravenous infusion of Labetalol to keep her diastolic blood pressure below 110 mmHg.

The patient's urine output was closely monitored using an indwelling catheter. It dropped to 12 ml/hour for the next two hours, and then increased to >40 ml/hour thereafter. Further investigation showed anaemia and thrombocytopenia, which were most severe 24 hours after delivery (Hb 7.7 g/dl; platelets $49x10^3/mm^3$ — see Figure 1), along with markedly elevated liver enzymes. She was transfused 3 units of packed cells between 26 and 34 hours after delivery, but otherwise was only given crystalloids intravenously.

The patient's hypertension and proteinuria resolved spontaneously during the next 48 hours, after which the Labetalol infusion was discontinued and she was discharged home five days after the delivery. At her six-week postnatal check, her blood pressure was 100/65 mmHg and urinanalysis was normal.

Discussion

This case demonstrates the development of haemolysis, elevated liver enzymes, and low platelet count (HELLP) syndrome some six hours after a normal pregnancy and delivery in a healthy multigravida, whose first pregnancy had also been normal. HELLP syndrome was first described in 1982[1] as an unusual form of pre-eclampsia/eclampsia in which there is periportal or subcapsular hepatic haemorrhage. The underlying pathophysiology is thought to be a combination of endothelial cell injury and intravascular platelet activation. There may be no presenting symptoms, or the patient may complain of malaise, headache, nausea, vomiting, and epigastric or right upper-quadrant pain — this last was the only symptom in our patient. The clinical signs include high blood pressure, hyperreflexia, right upper-quadrant tenderness, and proteinuria. The syndrome is uncommon after a normotensive pregnancy, occurring approximately once in 22 000 deliveries.[2] It has been described occurring up to seven days postpartum, but usually develops within 48 hours of delivery. Its development in multigravida is not uncommon.[3]

Most cases of postpartum HELLP sydrome will resolve spontaneously within 48 hours, as happened in this case. However, severe hypertension will need treatment to prevent stroke, and in some cases the condition may worsen, with the development of pulmonary oedema or acute renal failure, and the patient will require admission to an intensive care unit.

With the increasing trend towards earlier postnatal discharge, it is possible that some women may develop HELLP at home. It is therefore important that this rare diagnosis is borne in mind when a woman develops epigastric or right upper-quadrant pain after a normal pregnancy and delivery, and that her blood pressure and urine are checked as part of her assessment. A significant fall in the platelet count in the antenatal period may be a useful indicator of risk.

References

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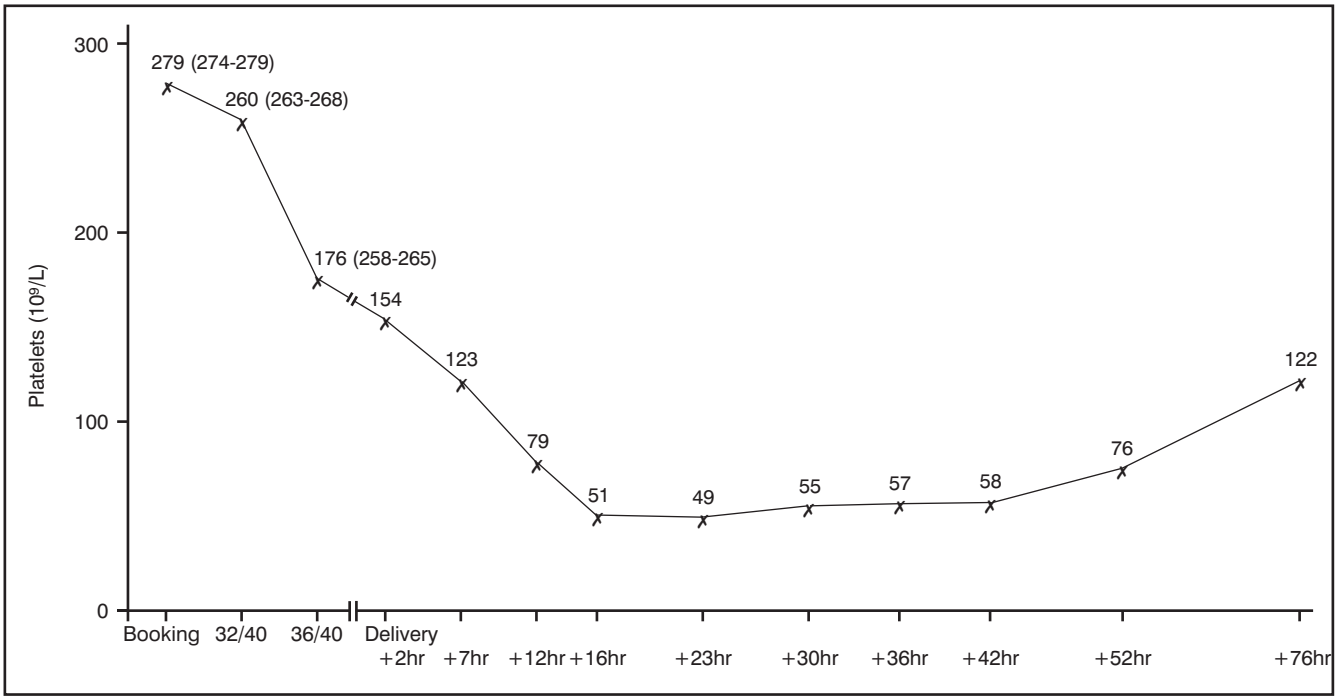

Figure 1. Patient's platelet count during pregnancy and after delivery. Normal ranges in the antenatal period are shown in parentheses next to each recorded platelet count; source: Ramsey MM, James DK, Steer PJ, et al. Normal values in pregnancy. London: WB Saunders, 1996.