

Acute pancreatitis associated with haemolysis, elevated liver enzymes, and low platelets syndrome

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BACKGROUND

Haemolysis, elevated liver enzymes, and low platelets (HELLP) syndrome occurs in approximately 0.2% to 0.9% of all pregnancies and in 10% to 20% of cases with severe preeclampsia.^{1,2} About 30% of the cases occur after delivery.² Case reports suggest that acute pancreatitis may be a rare complication of HELLP syndrome and severe preeclampsia.^{3,4,5}

CASE

A 22-year-old, G2P0, 30+5/40 was transferred to a tertiary hospital following a new diagnosis of preeclampsia on background IUGR (AC = 2nd centile). Past history included appendectomy and nil alcohol/drugs/smoking. At 31/40 she had a hypertensive crisis (systolic BP 180mmHg) which was difficult to control. It was associated with epigastric pain and severe vomiting. She underwent a NELUSCS with EBL 500mL and was subsequently transferred to the ICU until her magnesium sulfate infusion was completed. Her blood tests about one hour prior and six hours post NELUSCS showed the changes outlined in table 1. Blood tests approximately six hours post Caesarean section were consistent with HELLP syndrome. A subsequent blood film revealed fragmented red cells and occasional burr cells. The next day her creatinine reached 278 $\mu\text{mol/L}$ and input was sought from the nephrology team for this acute kidney injury deemed secondary to HELLP syndrome. The ultrasound kidneys, ureters, bladder had nil features to suggest renal tract obstruction. On day four postoperatively, the patient developed acute onset severe epigastric pain radiating to the back. Her lipase was initially 19 U/L and in three hours increased to 13100 U/L. She was diagnosed with acute pancreatitis and abdominal ultrasound showed uncomplicated cholelithiasis. Following conservative management with clinical and biochemical improvement, she was discharged and followed up in the general surgery outpatient clinic to book cholecystectomy.

Table 1: Blood tests about one hour prior and six hours post NELUSCS

Blood test	≈ one hour prior to NELUSCS	≈ Six hours post NELUSCS
Haemoglobin (g/L)	125	116
Platelets ($10^9/\text{L}$)	160	49
Alanine aminotransferase (U/L)	188	1560
Aspartate aminotransferase (U/L)	206	Haemolysed though 2340 the same morning
Bilirubin ($\mu\text{mol/L}$)	13	90
Lactate dehydrogenase (U/L)	594	Haemolysed though 3090 the same morning with associated haptoglobins < 0.1g/L
Creatinine ($\mu\text{mol/L}$)	66	101

DISCUSSION

Whilst the most common causes of acute pancreatitis are gallstones and heavy alcohol consumption, there are many other aetiologies. In an obstetric context, cases of acute pancreatitis published in the literature believed to be caused by severe preeclampsia/HELLP syndrome with no pharmacological, biliary, or other metabolic causes have been increasing. Even though the common cause of gallstones applied to this patient, her acute pancreatitis is likely to have been exacerbated by her HELLP syndrome.

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