Emergency caesarean section in undetected pseudobartters syndrome

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Introduction

Placental function and maternal homeostasis determine the electrolyte equilibrium achieved between maternal and foetal circulations.

We describe a case of undetected pseudobartters syndrome that presented for an emergency caesarean-section. This contributed to foetal metabolic acidosis, dyselectrolytemia ,needing prolonged neonatal intensive care for intraventricular haemorrhage.

Case report

A 29 year old pregnant woman known to have depression, bulimia nervosa, diet controlled diabetes & bipolar disorder was admitted on labour ward for preterm labour & projectile vomiting. She had a category 1 caesarean-section for feral bradycardia .On application of BP cuff, severe carpopedal-spasm was noticed by the anaesthetist. A venous blood gas was performed prior to induction showed severe metabolic alkalosis (Ph 7.65), hyponatremia (Na:122), Hypokalaemia (K:2.7) , hypochloremia (Cl: 75) and hypocalcemia (Ca:0.97). Patient had a rapid sequence induction for anaesthesia with Propofol & Suxamethonium. Calcium gluconate 10% 10ml was administered to correct hypocalcemia . Central venous pressure was inserted for further electrolyte replacement . Patient maintained sinus rhythm, remained haemodynamically stable and didn't need any cardiovascular support during the procedure. She was successfully extubated at the end of the procedure. A morphine PCA was prescribed for pain relief and electrolytes were corrected over a period of 4 days. Baby had metabolic alkalosis, hyponatremia (Na:118), hypokalaemia (K:2) , hypocalcemia & hypochloremia, had grade 3 intraventricular haemorrhage needing 9 days of NICU for ventilation & electrolyte correction.

Discussion

Bulimia nervosa & self induced vomiting may have been contributory to the metabolic alkalosis & electrolyte abnormalities as seen in this case. Presence of severe hypokalemic metabolic alkalosis associated with hyponatraemia & hypochloraemia suggests a likelihood of Pseudobartters syndrome. The changes in the pH of foetal CSF are known to correlate with maternal arterial pH changes. Elevation in fetal CSF pH may cause contraction of cerebral vasculature in the foetus predisposing to intracranial bleeding as seen in this case. Early detection& treatment of maternal acid-base imbalance and dyselectrolytemia is essential part in pregnant patient.

Conclusion

Early detection & treatment of maternal dyselectrolytaemia and metabolic imbalance would prevent foetal complications & improve fatal outcome.

References

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