Severe Hyperemesis Gravidarum Presenting in Active Labour with Profound Multi-System Derangement

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Introduction

- Hyperemesis gravidarum (HG) affects ~3% of pregnancies[1]
- Typically resolves by 20 weeks[2]
- Severe/prolonged HG is rare
- Risk of severe metabolic derangement with prolonged HG
- Rarely presents with multi-system derangement at term

Case summary

❑ Presentation:	19 year old, G2P1 Presented at 36^{+3} in spontaneous labour 5cm dilated at presentation
❑ Antenatal Hx:	Recurrent vomiting throughout pregnancy Up to 10 episodes/day by 32 weeks
❑ PMHx:	Asthma, eczema, cyclical vomiting syndrome
❑ SHx:	Regular cannabis use
❑ DHx:	Symbicort, Ventolin, Ondansetron, Prochlorperazine
❑ Investigations:	Severe derangement on routine admission bloods (see table) Profound metabolic, renal and hepatic involvement ECG signs of severe hypokalaemia seen
❑ Working diagnosis:	Severe HG with malnutrition and severe biochemical disturbance
❑ Differentials:	Acute fatty liver of pregnancy Conns syndrome Pancreatitis

Biochemical markers

Parameter	Value	Significance
Na^+	126mmol/L	Hyponatraemia
K^+	2.5mmol/L	Severe Hypokalaemia
Creatinine	242umol/L	AKI
PO_4^+	0.27mmo/L	Starvation
Albumin	23g/L	Malnutrition
ALT	437IU/L	Hepatic involvement

Clinical Course

Immediate
- Urgent MDT input on labour ward
- Commenced peripheral electrolyte replacement
- Invasive blood pressure monitoring
- Uncomplicated vaginal delivery within few hours

Hours
- 48hour admission to ICU
- Central electrolyte replacement
- Cautious nutritional support + Thiamine
- Continuous ECG monitoring

Days
- Biochemistry normalised within 48hours
- Day 5 postpartum two self limiting tonic-clonic seizures – unclear the underlying cause

Discussion

- Rare but severe presentation of HG persisting to term
- Severe multi-organ involvement due to prolonged starvation
- This case highlighted an extremely high risk of refeeding syndrome
- Contributing factors include cyclical vomiting syndrome, cannabis use, limited nutritional reserve

- Possible link to **Cannabinoid hyperemesis syndrome (CHS)**
→ CHS may co-exist with or exacerbate HG
→ Cannabis use is associated with increased severity, delayed diagnosis and treatment resistance in vomiting of pregnancy/HG
→ Increase in use of cannabis among the pregnant population[1]
→ Cannabis used in general population as anti-emetic
→ Most effective management is cannabis cessation

Key learning points

- HG can persist to term with **life threatening metabolic complications**
- **Early MDT** input improves patient outcomes
- We must consider cannabis-related vomiting syndromes
- Consideration for overlapping obstetric pathology
- Patient and medical education is key for **early recognition**
- We must learn from missed opportunities for management
- Patients must feel **listened to** and heard

References

1. Galvin SL, Coulson CC. Addressing cannabis consumption among patients with hyperemesis gravidarum. AJOG Glob Rep. 2023 May;3(2):100180.
2. Nana M, Painter R, Williamson C, Nelson-Piercy C. Hyperemesis gravidarum. Lancet. 2026;407(10523):78–89.