Hyperemesis Gravidarum

Introduction

- >70% pregnant women have N&V, mainly in late 1st trimester (misnamed morning sickness)
- 25% significant enough to affect ADLs
- 0.3-3% hyperemesis gravidarum

Definition

- Intractable N&V in early pregnancy – not responsive to standard measures.
- Fluid and electrolyte imbalances
- Nutritional deficiency – ketosis & wt loss>5% pre-pregnancy weight
- Hospital admission/s
- Not due to extra-gestational disease

Pathophysiology

- Exact cause not known but ↑levels of hCG, thyroxine and oestrogen may be involved.
- Psychological factors have also been implicated.

Risk factors

Hyperemesis gravidarum is more common in:

- Trophoblastic disease – molar pregnancy
- Multiple pregnancies
- Previous or family history of hyperemesis gravidarum
- Nulliparity
- Female fetus
- Maternal obesity
- Age < 30y
- Non-smokers

Assessment

History: Pregnancy (LMP, dates, progress to date. Previous pregnancies). Frequency & timing of symptoms. Ability to eat/drink. Weight gain/loss. Rx tried. Past medical history, allergies, any supplements/medications, etc.
Exam: Dehydration, weight loss, postural hypotension, tachycardia, collapse, ketosis.

Investigations

Urine: ?ketonuria, urine specific gravity. MSU to exclude UTI.
Bloods: FBC, UEC, BSL, βhCG (if 1st trimester), LFT (transaminitis), TFT (often ↑T4).
Imaging: USS if not done yet – r/o multiple preg/hydatiform mole

Management

Acute treatment:

- IVF with NS ± KCl
- **Thiamine** 100mg PO/IV if nutritionally depleted
- **Metoclopramide** [A] 10-20mg IV q6h or **prochlorperazine** [C] 12.5mg IV q6-8h
    - **Ondansetron** [B1] 2-8mg SL/PO/IV if these fail
    - If all else fails: **prednisolone** 20-30mg PO bd x 3d then halve dose every 3d
- Treat any reflux: **pantoprazole** [B3] 40mg PO/IV bd or **rabeprazole** [B1] 20mg PO bd
- Treat any constipation: **Normacol Plus**: 1-2tsp + fluids up to bd
- Admit if failed TOF/solids, remaining ketotic, significantly deranged bloods.

Treat any other condition discovered
Discharge Rx:

- General supportive measures
  - Drink and eat little and often.
  - Meals high in carbohydrate and lower in fat are better.
  - Cold meals reduce smell-related nausea.
  - Avoid caffeine and alcohol as these can enhance dehydration.
- Non-drug treatment
  - **Ginger** capsule 250mg PO qid.
  - P6 Neiguan point acupressure (located on volar aspect of the forearm 2-3 fingerbreadths proximal to the wrist crease) 5mins q4h
- Drug treatment
  - Vitamin B6 (**pyridoxine**): 25mg PO q6-8h
  - Vitamin B2 (**thiamine)** 100mg PO od
  - Vitamin B12 (**cyanocobalamin**): 6mcg PO OD
  - Antihistamines – **doxylamine** 12.5mg mane, midi & 25mg nocte PO
  - Antiemetics: **metoclopramide** 10mg PO q6h or **prochlorperazine** 5mg PO q8h or **ondansetron** (if others don't work – needs drug approval) 2mg bd-8mg tds PO
  - Anti-reflux: If GORD give **rabeprazole** 20mg PO od-bd.
  - Steroids have been used with some effect but evidence lacking.
  - Ensure appropriate supplements: Folate, iodine (if def area), iron (if req).

Complications

- Wernicke's encephalopathy due to thiamine deficiency. Clinical features include diplopia, nystagmus, ophthalmoplegia, ataxia and confusion. It can lead to irreversible Korsakoff's.
- Other vitamin deficiencies: Vitamin B12 and vitamin B6 deficiency can cause anaemia, peripheral neuropathy and subacute combined degeneration of the spinal cord.
- Mallory-Weiss tears and oesophageal rupture.
- Hyperthyroxinaemia.
- Hyponatraemia: This can lead to lethargy, confusion, convulsions and respiratory arrest.
- Depression: This can occur in up to 60% of women. In the worst cases it may lead to women wanting to terminate their pregnancy.

Differential diagnosis

- Pregnancy-related: e.g. pre-eclampsia, acute fatty liver of pregnancy
- GIT: e.g. GE, appendicitis, cholecystitis, PUD, obstruction, pancreatitis, hepatitis
- GUM: e.g. UTI, renal calculi, degenerating uterine fibroid, ovarian cyst torsion
- ENT: e.g. labyrinthitis
- Endocrine: e.g. hypercalcaemia, diabetic ketoacidosis, thyrotoxicosis
- Neurological: e.g. migraine, tumours
- Psychological: e.g. eating disorders
- Drug toxicity or intolerance: e.g. iron

Prognosis

Some evidence that if poor pregnancy weight gain (<7kg) in context of hyperemesis then higher incidence of low birth weight, pre-term delivery, Apgars<7.