CLINICAL GUIDELINE

Hyperemesis Gravidarum, Guideline, Obstetrics

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

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Approval Group:	Obstetrics Clinical Governance Group

Important Note:

The Intranet version of this document is the only version that is maintained.
Any printed copies should therefore be viewed as ‘Uncontrolled’ and as such, may not necessarily contain the latest updates and amendments.

Greater Glasgow & Clyde Obstetric Guidelines

Hyperemesis Gravidarum

Applicable unit policies Hyperemesis Gravidarum flow chart (Maternity Assessment)
Diabetic Antenatal Insulin Regimen Including DKA

Background

Up to 80% of women experience nausea and vomiting of pregnancy (NVP). It usually begins between week four and seven of pregnancy, peaking in the ninth week and in 90% of women resolves by the 20th week. If the onset is after the first trimester other causes must be considered. Hyperemesis Gravidarum (HG) is the severe form of NVP which affects 0.3-3.6% of pregnant women.

Diagnosis

HG is diagnosed when there is prolonged NVP in addition to weight loss of more than 5% prepregnancy weight, dehydration and electrolyte imbalance.

Clinical Assessment

It is important to ensure a focused assessment is made in order to diagnose correctly and monitor the severity of HG.

History

- **Onset**
- **Severity of nausea and vomiting** – spitting, weight loss, unable to tolerate diet/fluids, quality of life
- Consider the use of PUQE score to monitor condition (See Appendix)
- **Systemic enquiry** to exclude other causes – abdominal pain, urinary symptoms, infection, chronic helicobacter pylori

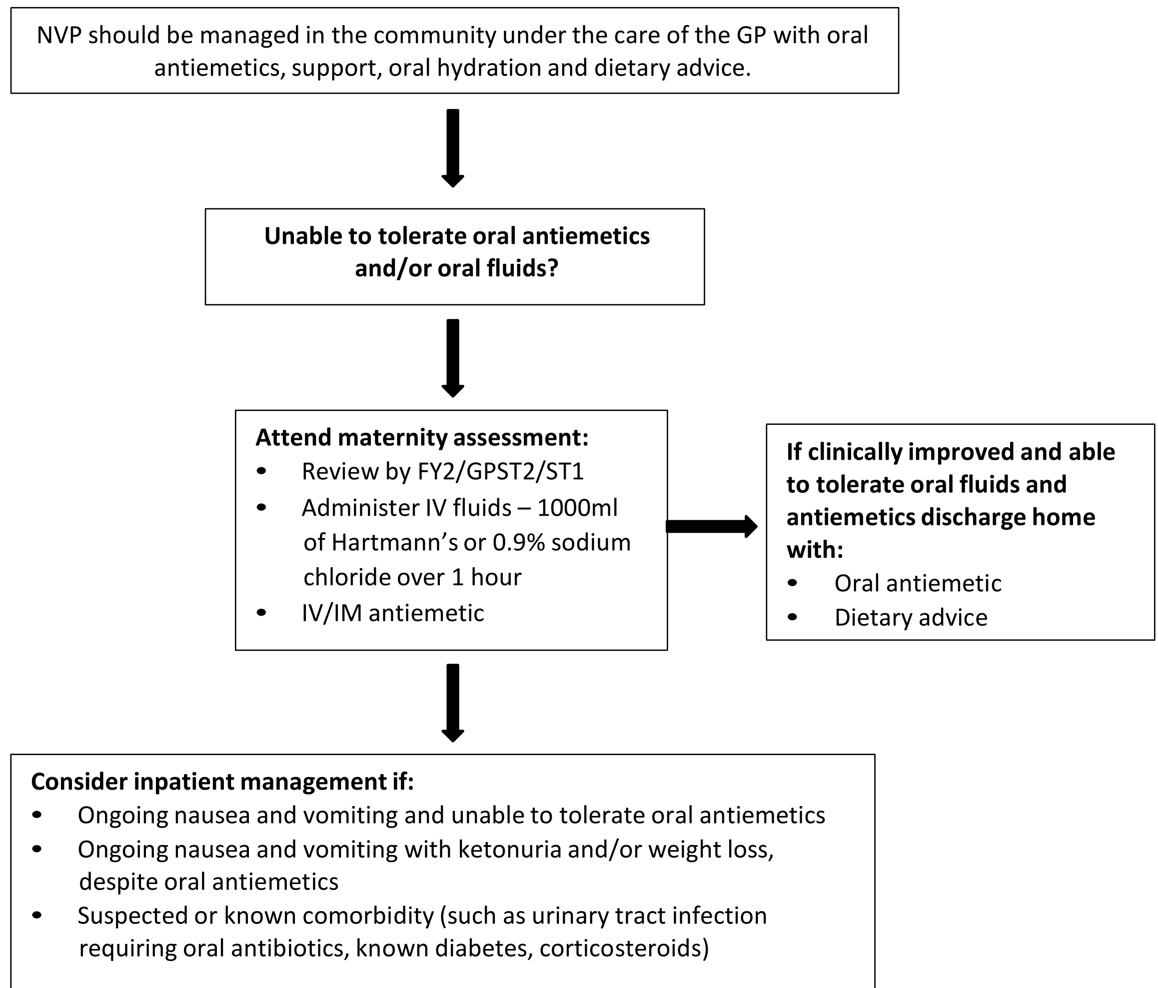
Examination

- **Maternal observations** – temperature, pulse, blood pressure, respiratory rate, oxygen saturations
- Abdominal examination
- Weight
- Signs of dehydration
- Signs of muscle wasting

Investigations

- **Urinalysis** – quantify ketonuria, blood/nitrates in keeping with urinary tract infection
- **MSSU**
- **Urea and electrolytes** – hypo/hyperkalaemia, hyponatraemia, renal disease
- **Full blood count** – infection, anaemia, haematocrit
- **Blood glucose** – exclude diabetic ketoacidosis if diabetic
- **In refractory cases consider**
  - Thyroid function tests – hypo/hyperthyroid
  - Liver function tests – exclude hepatitis or gall stones, monitor malnutrition
  - Calcium and phosphate
  - Amylase – exclude pancreatitis
  - Arterial blood gas – exclude metabolic disturbances
- **Ultrasound –** ensure viable intrauterine pregnancy prior to discharge

Management



Inpatient Management

Maternal Observations

- Regular observations should be recorded on antenatal MEWS
- Ensure fluids balance is adequately recorded

Intravenous Fluids

- Adequate intravenous fluid and electrolyte replacement is the most important intervention in the management of HG. This should be guided by daily monitoring of electrolytes and twice daily urinalysis to check for ketones

Suggested regime:

- 1000ml of Hartmann's or Sodium Chloride 0.9% over one hour
- 500ml of Hartmann's or Sodium Chloride 0.9% with 20 mmol KCL over 2 hours
- 500ml of Hartmann's or Sodium Chloride 0.9% with 20 mmol KCL four hourly

Dextrose infusions can cause Wernicke's encephalopathy. Dextrose should not be prescribed unless sodium levels are normal and thiamine has been administered. It may be indicated for particular patients such as those with diabetes.

Thiamine Supplementation

- Thiamine should be given to all women with prolonged vomiting
- If can tolerate oral medication prescribe Thiamine Hydrochloride 50mg TDS PO
- If unable to tolerate oral medication prescribe Pabrinex one pair of amps OD IV for 3 days

Antiemetic Therapy

- Should be prescribed regularly and not as required
- A combination of different drugs should be used in women who do not improve with a single medication
- Consider parenteral or rectal route in those with severe HG

1st line	Prochlorperazine 5-10 mg TDS PO; 12.5 mg TDS IM or IV Or Prochlorperazine (Buccastem®) 3-6 mg BD Buccal Or Cyclizine 50 mg TDS PO, IV or IM
2nd line	Metoclopramide 5*-10 mg TDS PO, IM or SLOW IV (Max 5 days) Or Domperidone 10 mg TDS PO Or Domperidone 30-60 mg TDS PR (unlicensed special - Hospital order) And / or Ondansetron 4-8 mg 6-8 hourly PO; 8 mg over 15 minutes 12 hourly IV **NOT TO BE USED IN FIRST TRIMESTER**

Side effects

- Drowsiness - particularly with prochlorperazine
- Extra pyramidal effects and oculogyric crisis with metoclopramide and prochlorperazine. For this reason metoclopramide should be used as a second-line therapy. *Young women 15 to 19 years old weighing less than 60 kg should receive 5 mg metoclopramide.
- Ondansetron is thought to be safe and effective in second and third trimester, however, based on human experience from epidemiological studies, ondansetron is suspected to cause orofacial malformations when administered during the first trimester of pregnancy.

Corticosteroids

- For intractable cases where antiemetics have failed consider the use of corticosteroids
- Hydrocortisone 100mg IV BD can be given for 48 hours until able to tolerate tablets
- Once clinical improvement occurs covert to oral prednisolone 40-50mg daily in a single or divided dose
- Gradually taper the dose until the lowest maintenance dose to control symptoms
- Continue to the gestational age at which HG would typically resolve

Suggested Regime	Dose	Route/Duration
Hydrocortisone	100mg BD	IV for 48 hours until able to tolerate fluids followed by
Prednisolone	40mg daily	PO for 4 days
	20mg daily	PO for 4 days
	10mg daily	PO for 4 days
	5mg daily	PO for 6 days then consider stopping treatment

Thromboprophylaxis

Women with HG are at increased risk of venous thromboembolism (VTE)

- All women should be given thromboprophylaxis (e.g. enoxaparin) unless specific contraindication
- A weight dependent dose of enoxaparin should be prescribed
- Enoxaparin should be discontinued on discharge if VTE risk is identified as being low

Complementary Therapies

- Ginger can be used in mild to moderate NVP in those wishing to avoid antiemetics
- Acustimulation (acupressure and acupunture) is safe in pregnancy and may improve NVP

<u>Management options for extremely severe HG</u>

Multidisciplinary team involvement

- Adopt a holistic approach and consider input from dieticians, pharmacists, endocrinologists, nutritionists and gastroenterologists
- Involving psychiatry and the mental health team can improve quality of life and provide psychological support

Enteral and Parenteral Nutrition

- Enteral or parenteral treatment should be considered when other medical therapies have failed
- This should be guided by input from the MDT

Termination of Pregnancy

- Offer termination of a wanted pregnancy only after all therapeutic measures have been tried
- Consider psychiatric opinion and before and after reaching this decision

<u>Inpatient Fetal Monitoring</u>

- In women over 20 weeks, auscultate the fetal heart on admission and daily as a minimum part of routine maternal observations
- Ensure all unbooked patients have an ultrasound arranged before discharge

Discharge and Follow-up

- Advise women to continue with oral antiemetics
- Ensure follow-up appointment arranged with midwife/consultant
- Those with severe NVP and HG who have ongoing symptoms in the late second and third trimester should be offered serial growth scans

References

RCOG, Green Top Guidelines No. 69 The Management of Nausea and Vomiting of Pregnancy and Hyperemesis Gravidarum
RCOG, Information for you, Pregnancy sickness (nausea and vomiting of pregnancy and hyperemesis gravidarum)
Pharmacovigilance Risk Assessment Committee (PRAC) Aug 2019

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APPENDIX 1

Pregnancy-Unique Quantification of Emesis (PUQE) index

Total score is sum of replies to each of the three questions. PUQE-24 score: Mild ≤6, Moderate = 7-12 and Severe = 13-15

Motherisk PUQE-24 scoring system

In the last 24 hours, for how long have you felt nauseated or sick to your stomach?	Not at all (1)	1 hour or less (2)	2-3 hours (3)	4-6 hours (4)	More than 6 hours (5)
In the last 24 hours have you vomited or thrown up?	7 or more times (5)	5-6 times (4)	3-4 times (3)	1-2 times (2)	I did not throw up (1)
In the last 24 hours how many times have you had retching or dry heaves without bringing anything up?	No time (1)	1-2 times (2)	3-4 times (3)	5-6 times (4)	7 or more times (5)

PUQE-24 score: Mild ≤6, Moderate = 7-12 and Severe = 13-15

How many hours have you slept out of 24 hours?_______ Why?_______________________________________

On a scale of 1 – 10 how would you rate your wellbeing?____

0 (worst possible) → 10 (the best you felt before pregnancy)

Can you tell me what causes you to feel that way?____