Aneurin Bevan Health Board

Protocol for the Management of Hyperemesis Gravidarum

N.B. Staff should be discouraged from printing this document. This is to avoid the risk of out of date printed versions of the document. The Intranet should be referred to for the current version of the document.

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Contents:

Introduction

This document is a guideline designed to support safe and effective practice.

Hyperemesis gravidarum is a severe form of nausea and vomiting in pregnancy affecting 0.1 – 1% of all pregnancies. It is defined as persistent vomiting in pregnancy (three/more times per day) associated with weight loss (more than 5% of pre-pregnancy weight) and evidence of dehydration – ketosis.

Aims

To provide support for clinical decision making

Objectives

To ensure that clinicians follow standardised guidelines

Scope

The guideline applies to all clinicians working within maternity and gynaecology services

Roles and Responsibilities

- The Gynaecology and maternity management team

Main Body

Symptoms

Typical clinical symptoms include:

- Onset in first trimester – usually 6-8 weeks
- Persistent nausea and vomiting causing dehydration
- Possible electrolyte imbalance
- Weight loss
- Ketosis
- If severe symptoms of hypovolaemia – tachycardia, postural possibly progressing to persistent hypotension

Diagnosis and treatment

Differential diagnoses of nausea and vomiting in pregnancy:

Infection – UTI, hepatitis
Drug induced – iron supplements, antibiotics
Metabolic – thyrotoxicosis, hyperparathyroidism/hypercalcaemia, diabetic ketoacidosis, uraemia, Addison's disease

Gastrointestinal – appendicitis, cholecystitis, small bowel obstruction, pancreatitis
Pregnancy – hydatiform mole, multiple pregnancy

Investigations & initial assessment

- On attendance – weight, full observations plotted on NEWs chart
- History and examination. Consider utilising the modified pregnancy-unique quantification of emesis and nausea (PUQE) scoring index to assess severity (appendix 1)
- Urine for urinalysis (in particular ketones) and MSU
- FBC, U&E, LFT, TFT (provides a useful index of severity of HG, which correlates with the degree of biochemical hyperthyroidism)

(NB – abnormal LFTs and TFTs indicate the severity of hyperemesis and do not require further investigation/treatment unless they do not resolve with improvement of hyperemesis)

- If first presentation consider BhCG
- Arrange pelvic USS to confirm intra-uterine pregnancy, identify multiple pregnancy and exclude molar pregnancy

The evidence base provided for the document. Name any recognised relevant professional body, for example the source of your evidence base. Where appropriate, specify what is required to be documented in patients' notes. Clinical policies should also include a review of the evidence used and a reference list of that evidence.

Management

Depends on degree of severity:

1. Mild – mild nausea and vomiting, no biochemical abnormalities, normal observations, no ketonuria. Patients can be treated as outpatients.
2. Moderate – mild – moderate nausea and vomiting, no biochemical abnormalities, normal observations, urinary ketones +1/+2. Consider day care management if facilities allow – Appendix 3.
3. Severe – severe nausea and vomiting, severe ketosis +3/ +4 urinary ketones. Biochemical abnormality, haemodynamically unstable. Patient requires admission and inpatient management – Appendix 2.

Exclusion criteria for outpatient management – severe hyperemesis, failed outpatient/day case management, haemodynamically unstable, abdominal pain or vaginal bleeding, patient unable to travel home, abnormal LFTs/TFTs, co-existing morbidities esp. diabetes/thyrotoxicosis/cardiac disease.

General advice for all women:

Psychological support – nausea can be part of a normal pregnancy, usually improves by 20 weeks gestation, unlikely to harm fetus.
Dietary modifications - small, frequent meals of bland, low-odour, high-complex carbohydrate, and low-fat foods.
Alternative treatments - ginger (and other herbal remedies—for example, chamomile and peppermint), acupuncture and B6 acupressure.

Refractory hyperemesis

If woman not responding to appropriate management or with repeated admissions, consider refractory hyperemesis:

- Weigh on each admission and perform weekly weights on patients needing longer term admissions
- Inform consultant
- Consider corticosteroids
  Loading dose: Hydrocortisone – 100 mg BD IM/IV x 1 day
  Maintenance dose:
  Prednisolone 40 mg/day – 3-5 days, then gradually reduce the dose and stop
  Prednisolone 5-10 mg/day. Gradually reduce the dose and stop
- If severe nutritional deficit consider total parenteral nutrition and involvement of dietician
- Consider alternative reasons for repeated admissions – social support, domestic violence/abuse, underlying psychological concerns.

Discharge

Before discharge the patient should tolerate fluid and a light diet if admitted for inpatient management, have no clinical signs of dehydration and no ketosis.

Discharge any woman diagnosed with hyperemesis with anti-emetic, regular thiamine (PO 25-50mg TDS) until hyperemesis resolved. Consider ant-acid gastric protection i.e. ranitidine.

Review

In 3 years unless medical developments requires differently

References

- Royal Cornwall Hospitals NHS Trust. Clinical guideline for day-case rehydration with moderate hyperemesis gravidarum in pregnancy. February 2012

- NHS Forth Valley Trust. Day- case rehydration for women with moderate hyperemesis gravidarum. December 2013

- North West Wales NHS Trust. Clinical Guidelines for Emergency Gynaecology Unit (EGU). August 2009.

- Antenatal Care. NICE clinical guidance 62; March 2008 (modified June 2010)

- RC Boelig, V Berghella, AJ Kelly *et al.* Interventions for treating hyperemesis gravidarum (protocol). The Cochrane Collaboration. 2013, Issue 6

- A Matthews, DM Haas, DP O'Mathuna *et al.* Interventions for nausea and vomiting in early pregnancy (Review). The Cochrane Collaboration. 2014, Issue 3

- R Gadsby, T Barnie-Adshead. Review. Severe nausea and vomiting of pregnancy: should it be treated with appropriate pharmacotherapy? The Obstetrician & Gynaecologist. 2011; 13:107-111

- AM Neill, C Nelson-Piercy. Hyperemesis Gravidarum. The Obstetrician & Gynaecologist. 2003; 5:204-207

- S. Sonkusare. The clinical management of hyperemesis gravidarum. Archives of Gynaecology and Obstetrics. 2011; 283: 1183-1192

- AG Tamay, NK Kuscu. Hyperemesis gravidarum: Current aspect. Journal of Obstetrics and Gynaecology. November 2011; 31:708-712

- S. Jarvis, C Nelson-Piercy. Management of nausea and vomiting in pregnancy. British Medical Journal. 2011; 342:d3606

- A Lacasse, E Rey, E Ferreira *et al*. Validity of a modified Pregnancy-Unique Quantification of Emesis and Nausea (PUQE) scoring index to assess severity of nausea and vomiting of pregnancy. American

Journal of Obstetrics & Gynaecology. January 2008; 71e1.

Appendix 1
Modified Pregnancy-Unique Quantification of Emesis and Nausea (PUQE) scoring index to assess severity

Modified PUQE				
Circle the answer that best suits your situation from the beginning of your pregnancy				
1. On average in a day for how long do you feel nauseous or sick to your stomach?				
Not at all	≤1hr	2-3hrs	4-6hrs	≥6hrs
(1)	(2)	(3)	(4)	(5)
2. On average in a day, how many times do you vomit?				
I did not vomit	1-2 times	3-4 times	5-6 times	≥7 times
(1)	(2)	(3)	(4)	(5)
3. On average how many times a day do you have retching or dry heaves without bringing anything up?				
None	1-2 times	3-4 times	5-6 times	≥7 times
(1)	(2)	(3)	(4)	(5)

Score:
Mild nausea and vomiting in pregnancy ≤ 6
Moderate nausea and vomiting in pregnancy 7-12
Severe nausea and vomiting in pregnancy ≥ 13

Lacasse. Validity of the modified-PUQE. Am J Obstet Gynecol 2008.

Appendix 2
Inpatient management

- Initial assessment as above
- First line management is IV rehydration – fluid replacement should be tailored to dehydration and electrolyte imbalance and must be adapted daily and titrated against daily measurements of U&Es.
    - Crystalloid normal saline/Hartmann's (with potassium chloride as required) are recommended.
    - Avoid dextrose solutions as they may precipitate Wernicke's encephalopathy.
    - Prompt correction of fluid deficit improves symptoms therefore suggested regimen:
        - 2l Hartmann's/N saline (+ potassium chloride as needed) over 4 hrs
        - Followed by maintenance fluids of 3-4l per 24hrs
    - Treat hypokalaemia with 500mls normal saline with 20mmols potassium chloride
- Withholding food to "rest" the gastrointestinal tract has never been formally evaluated and is therefore not recommended. Women should be advised to continue oral intake as symptoms allow.
- Anti-emetics:
    - Initially IV until tolerating oral diet
    - Limited evidence of best anti-emetic. Suggestions
        - First line – cyclizine 50mg TDS/metoclopramide 10mg TDS (note possibility of oculogyric crisis with metoclopramide – treat with procyclidine). Not recommended by pharmacy to use in conjunction.
        - Second line – prochlorperazine, chlorpromazine, domperidone.
        - Refractory – ondansetron as second agent
- Thiamine –if able to tolerate orally – 25-50mg TDS. If not IV 100mg in 100mls N saline over 30-60 minutes given once weekly (IV pabrinex is a reasonable alternative if recommended dosing not possible). Continue thiamine orally if possible.
- Withhold any non-essential emetic medications
- All women admitted with hyperemesis need thromboprophylaxis whilst inpatients as per protocol.
- Consider gastric protection in refractory or severe hyperemesis – ranitidine 150mg BD.

- Consider high dose folic acid in refractory or severe hyperemesis – folic acid 5mg OD.
- Discharge once tolerating fluid and a light diet, have no clinical signs of dehydration and no ketosis.

Appendix 3
Day case management

- Initial assessment as above
- IV rehydration – 2l of crystalloid (normal saline/Hartmann's) + potassium per electrolytes over 4hrs
- Anti-emetics – cyclizine/metoclopramide initial dose IV/IM then continue orally
- Thiamine – 25-50mg PO TDS if tolerating or 100mg IV in 100mls normal saline
- Withhold any non-essential emetic medications
- Re-assess in 4-6hrs – if tolerating oral fluids continue with outpatient management.
- Discharge once tolerating fluid, have no clinical signs of dehydration and no ketosis.
- Discharge on oral anti-emetics and thiamine.