

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> Confirmed diagnosis of hyperemesis gravidarum See <i>Hospital at Home Service Model CC-SD-002</i> 	<ul style="list-style-type: none"> Co-existing medical conditions requiring hospital admission Evidence of hypovolaemic shock Evidence of life threatening electrolyte imbalance Acute disorders of pregnancy requiring specialist care Evidence of vitamin B deficiency/ Wernicke’s encephalopathy symptoms’ include confusion, ataxia, eye movement disorders

PATHOLOGY WORK-UP

- Baseline urea and electrolytes (U & E’s), full blood picture (FBP) and magnesium (Mg).
- Mid-Stream Urine (MSU) for Microscopy, Culture and Sensitivity (M C and S) if urinalysis is positive for leucocytes/nitrites and no evidence of recent MSU (previous 72 hours)
- Daily urinalysis for Specific Gravity (SG) and ketones.

Day 3 (and every 3rd day thereafter)

3rd. Daily blood tests for urea and electrolytes, full blood picture and magnesium.

TREATMENT REGIME

- Access blood results for baseline U & E’s, FBP and Mg from the referral source. If unavailable organise domiciliary pathology visit within 24 hours for baseline.
- Collaborate with governing doctor regarding abnormal pathology results.
- Initiate intravenous access and commence intravenous therapy as prescribed. Sodium Chloride 0.9% should be the fluid of choice. Hartmann’s has no advantage. Dextrose containing fluids are CONTRAINDICATED as they may precipitate encephalopathy and may also worsen hyponatraemia
- Commence antiemetic therapy and vitamin therapy as prescribed. (See Appendix 1)
- Minimum of BD visits
- Nursing assessment as per Hyperemesis Gravidarum Assessment Tool.
- Use of Pregnancy Unique Quantification of Emesis (PUQE) assessment tool (see client information leaflet).
- Intravenous therapy guided by the severity of the emesis, ketones value in urine, skin turgor, weight, vital signs and serum electrolytes.
- Administer prescribed intravenous therapy and intravenous anti-emetics/vitamins (liaise with referrer re supply of medications) (1).
- Monitor and advise client re dietary management (refer to dietician information sheet).
- Monitor and advise client on psychological wellbeing refer to other agencies if evidence of decompensating mental health.
- Monitor and advise client re oral medications and antiemetic regime.
- Discharge from HATH after minimum of 24 hours of minimal symptoms not requiring intravenous therapy.
- If condition worsens refer back to governing doctor and/or referral hospital.

Appendix 1

Medications	Additional Information
Prescribe anti-emetics.	Anti-emetics appear to reduce the severity and frequency of nausea in the first trimester.
1st line treatment includes <ul style="list-style-type: none"> Metoclopramide (Maxalon) oral 10 mg tds. 	These drugs may have side effects such as oculogyric crises and other extrapyramidal symptoms. This is particularly true if prescribing metoclopramide to a teenager where symptoms may be exacerbated.
Prescribe pyridoxine (vitamin B6) 10-25mg tds.	In accordance with standard therapeutic practice, start treatment with the lower dose. Pyridoxine alone appears to be effective in reducing the severity of nausea and is less likely to produce side effects. Administration will also reduce the risk of Vitamin B6 deficiency. In combination with metoclopramide it appears to be superior to other monotherapy in the treatment of nausea and vomiting in pregnancy.
Consider prescribing folic acid . ⁴	Folic Acid at the time of conception and in the first trimester is associated with a reduction in neural tube defects. 0.5mg is the daily recommended dose.

If first line treatment fails, the following alternatives may be considered after medical consultation:

Second Line Drug Therapy	
Metoclopramide 10 mg IM or slow push IV (2 min).	
Consider prescribing antihistamines such as: Promethazine (Phenergan) oral 5 -10 mg tds or 12.5 mg deep IM up to tds - in the interval between administration of metoclopramide.	While not contra - indicated IV promethazine may cause a transient drop in blood pressure.
Consider other anti-emetics such as ondansetron following medical consultation: 4-8 mg tds administered either oral (tablet or wafer) or using a slow IV push (2-5 mins) <ul style="list-style-type: none"> Refractory vomiting. . Recurrent hospital admissions. 	Note: Anti reflux measures may also be useful. <ul style="list-style-type: none"> Ranitidine or proton pump inhibitor. Elevate bed head. Small frequent feeds. Remain upright >2 hours after eating.
Consider prescribing thiamine (Vitamin B1) 100mg.	There is a positive association between Wernicke's encephalopathy and hyperemesis gravidarum. Thiamine supplementation should be considered for women with prolonged vomiting.

<p>Third Line Drug Therapy</p>	
<p>Used rarely – and only after consultation 20mg prednisolone twice daily orally or 100mg hydrocortisone IV twice daily.</p>	<p>While promethazine reduces the symptoms of hyperemesis gravidarum faster than prednisolone during prolonged treatment prednisolone has at least the same effects on the symptoms and less drug side effects.</p> <p>Corticosteroid therapy has also been shown to lead to an improved sense of well being improved appetite and increased weight gain compared with placebo without significantly reducing vomiting or dependence on intravenous fluids.</p>

REFERENCES

- Women and Newborn Health Service King Edward Memorial Hospital Clinical Guideline Section C 9.6 Management of Hyperemesis Gravidarum. July 2015.
- Gideon Koren, Radinka Boskovic et al Motherisk -P.U.Q.E. (pregnancy – unique quantification of emesis and nausea) scoring system for nausea and vomiting of pregnancy. American Journal a228-31
- eTG complete 2008. Therapeutic Guidelines limited. [Online].November 2008[2009 Aug 06]; Available from: URL: <http://etg.tg.com.au.rplibresources.health.wa.gov.au/ip/>
- Castillo R, Ray R, YachmanF, 1989 Central Pontine myelinolsis & pregnancy Obstet Gynecology73: 459-461