Hyperemesis Gravidarum Management Protocol

Guideline History

<table>
<thead>
<tr>
<th>Original Approve Date</th>
<th>6/01</th>
</tr>
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<tbody>
<tr>
<td>Review/ Revise Dates</td>
<td>07/03, 09/05, 3/07, 05/07, 7/09, 06/11</td>
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<tr>
<td>Next Review Date</td>
<td>07/11, 07/13</td>
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Hyperemesis Gravidarum Management Protocol

Definition:
- Incidence is – 5/1000
- Fetal complications include IUGR (Intrauterine growth restriction) in about a third of fetuses
- Maternal complications include Wernicke's encephalopathy (ophthalmoplegia, gait ataxia and confusion)

Criteria:
- Persistent nausea and vomiting, weight loss greater than 5% of pre-pregnancy weight and large ketonuria
- Consider other etiologic causes if nausea and vomiting started after 9 weeks gestation
- TSH is almost always less than 2.5 mU/ml in hyperemesis, if not consider other etiologies

Exams and Laboratory Evaluation
- Physical exam.
  - The following laboratory tests will be done to check for signs of dehydration:
    - Hematocrit
    - Urine ketones
  - Tests to rule out liver and gastrointestinal problems
  - Ultrasound to determine pregnancy with multiples and to check for a hydatidiform mole.
Management:

**Step One: (Mild)**

**Dietary modification/Psychological support/OTC medications**

- 6 Small dry meals (Try saltine crackers, potato chips, ginger ale and ginger snaps.)
  - Avoid fried, spicy food
  - Avoid cigarettes, caffeine
- Increase oral fluids as tolerated
- Psychological support with reassurance about well being of pregnancy, family counseling, brochure
  - OTC –
    - start with Vitamin B6 (pyridoxine),
    - Doxylamine (Unisom)
  - Ginger can also be an effective treatment.
- Refer to “Partners in Pregnancy” OB program. Call toll free @ 1-866-239-0618 or refer to [www.optimahealth.com](http://www.optimahealth.com)
- Office visit once per week until resolution

**Move to Step Two if no Improvement in 5-7 days**

**Step Two: (Moderate)**

2A – Start with outpatient Anti-Emetic Therapy- First Line anti-emetic therapy

<table>
<thead>
<tr>
<th>Brand Name</th>
<th>Generic Name</th>
<th>Strength/Rate of Administration</th>
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<tbody>
<tr>
<td>Reglan</td>
<td>Metoclopromide</td>
<td>10mg/po QID</td>
</tr>
<tr>
<td>Phenergan</td>
<td>Promethazine</td>
<td>25mg/po Q 4-6 hrs (prn)</td>
</tr>
<tr>
<td>Tigan</td>
<td>Trimethobenzamide</td>
<td>200mg/supp Q 4-6 hrs (prn)</td>
</tr>
<tr>
<td>Compazine</td>
<td>Prochlorperazine</td>
<td>25mg/supp Q 4-6 hrs (prn)</td>
</tr>
<tr>
<td>Phenergan</td>
<td>Promethazine</td>
<td>25mg/supp Q 6 hrs (prn)</td>
</tr>
<tr>
<td>Zofran</td>
<td>Ondansetron</td>
<td>4mg/po Q 6 hrs (prn) up to 8mg/po TID</td>
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</tbody>
</table>

*** If not able to take PO – Compazine supp, Phenergan supp

- More costly agents should only be used when the patient has failed a combination of less costly agents. For further information related to medications, please refer to [www.OptimaHealth.com](http://www.OptimaHealth.com); under Provider/Pharmacy/Formularies/Drug Lists.
- Continue step one management

Please refer to this list when prescribing for your patient. Your patient will have lower drug costs if you prescribe generic drugs and allow brand substitution for dual-branded products.

2B – Start IV Hydration Intravenous hydration / Anti-emetic therapy

- Start at hospital outpatient IV center or Home Health with isotonic solution (NS or LR500 – 1000cc bolus then 100 – 125cc/hour). Replace Thiamine (100mg in 100cc NS over 30 minutes) before any dextrose containing solution. Supplement MVI-12 and 600 mcg folic acid (for a total of 1mg folic acid per day) in one bag IVF daily.
- Home order: Hyperemesis Gravidarum Home Health Order Set. *(Call Sentara Home Care Services @ (757) 553-3000 or Toll Free @ 1 (888) 461-5649)*
- Obtain Labs:
  - BMP
  - Magnesium
  - Phosphorus
- Replace electrolytes:

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- Potassium
- Magnesium
- Phosphorus as lab values indicate.
- Phenergan 25 mg IVPB.

**Move to Step three if no improvement in 7 days**

**Step Three: (Severe)**

**Corticosteroid therapy**

If symptoms persist despite treatment with IV hydration and anti-emetic therapy, consideration should be given to corticosteroid therapy. In a randomized trial, methylprednisolone was shown to be efficacious in the treatment of hyperemesis.

**Medrol Dosing Schedule:**

<table>
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<tr>
<th>Day</th>
<th>Morning</th>
<th>Midday</th>
<th>Bedtime</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16 mg</td>
<td>16 mg</td>
<td>16 mg</td>
</tr>
<tr>
<td>2</td>
<td>16 mg</td>
<td>16 mg</td>
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</tr>
<tr>
<td>14</td>
<td>4 mg</td>
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</tbody>
</table>

**Move to Step Four if no improvement in 4–5 days**

**Step Four: (Inpatient) Failure of all other methods**

**Hospital admission / enteral – peripheral – Central alimentation**

- Admit to hospital
- Full laboratory work up (CBC/BMP, magnesium, phosphorus, ionized calcium, prealbumin, liver function, amylase, T4, urinalysis)
- Consider enteral nutrition – see Hyperemesis Gravidarum order set.
  - If patient cannot tolerate adequate oral intake, a small bore nasogastric feeding tube (8 French) should be placed by the physician. Intragastric placement will be confirmed by the easy aspiration of stomach contents and by an appropriate bubbling sound heard by stethoscope auscultation over the epigastrium in response to the injection of air. Lidocaine spray can be used to help attenuate tube placement and with concurrent tube feeding to help attenuate tube irritation. Afrin nasal spray can help reduce sinus inflammation. Xylocaine ointment can be used in the nasal septum prior to tube placement as needed.
- Consider peripheral or central parenteral nutrition – see hyperemesis gravidarum order set
- Treat as inpatient for 2–3 days (or as indicated by clinical condition)
- Discharge to Home health for continued enteral or parenteral nutrition
Sentara Home Care Services
Hyperemesis Physician Orders/Plan of Treatment

Patient Name: _______________________________ Admit #: _______________________________

Diagnosis (es) ______________________________ Certification Period From: _________ To: _________

BEGIN SERVICE  (Check One)
(   ) ASAP  (   ) Hospital Discharge

HOME MONITORING
(   ) Vital Signs with Fetal Monitoring twice per week (   ) Maternal Weight twice per week
(   ) Urine Ketones twice per week (   ) Monitor daily while on Tube Feeding

MEDICATIONS/IV HYDRATION
(   ) NS 500cc bolus
(   ) NS 125cc/hr
(   ) IV D5P56 @150cc/hr
(   ) IV D5P56 @125cc/hr
(   ) Thiamine 100mg in 100cc NS Now
(   ) Thiamine 50mg in 1 liter NS per day, 1st IV of the day

PHYSICAL ACTIVITY (Check One)
(   ) No limits     (   ) Modified Bedrest    (   ) BR with BRP    (   ) Strict Bedrest    (   ) Other

TUBE FEEDING
(   ) Vivonex 30cc/hr  $
(   ) Peptomin 30cc/hr $$
(   ) Osmolyte 30cc/hr $$$

LAB ORDERS  (Twice per Week)
(   ) BUN   (   ) Creatinine   (   ) Lytes

HYPERAL LAB ORDERS (Daily)
(   ) Labs
(   ) CBC
(   ) Creatinine
(   ) Urine Ketones
(   ) Lytes

Additional Orders _________________________________________________________
______________________________________________________________________
______________________________________________________________________

Physician Signature  ________________________________  Date  __________________
RN Signature  ________________________________  Date  __________________

White – Medical Record   Yellow – Physician   Pink – Nurse

06/2011: Verified still in use with Sentara Home Care Services

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References


