

Hyperemesis Gravidarum Management Protocol



REHYDRATE METHODICALLY

Banana Bag + B vitamins (B1, B6)
Myer's Cocktail + 1 ampule MVI + folic acid
D5NS + 1 ampule MVI + 100 mg thiamin + folic acid
*Add: vit K, vit D, zinc, selenium, iron, magnesium and calcium prn



IMPLEMENT COMPASSIONATE CARE

Women with HG are miserable for months and their concerns and requests should be taken seriously. Every possible comfort measure should be taken to minimize unnecessary suffering. Compassionate and effective treatment prevents therapeutic termination, and influences if she and baby will suffer from physical and psychological complications (e.g. trauma, organ damage) during pregnancy and long-term.



PRESCRIBE ANTIEMETIC MEDICATIONS

Choose a drug targeting the main triggers (e.g. motion). If numerous triggers, and/or more severe symptoms, consider serotonin antagonists. Multiple meds may be needed simultaneously throughout pregnancy. Be proactive and aggressive early in pregnancy if she has a history of HG. See tiered medication list below. [2](#)



PREVENT OR TREAT ADDITIONAL ISSUES

Issues: ptyalism, GERD, encephalopathy, gastroparesis, UTI, insomnia, h-pylori, cholestasis, debility, embolus
Medication side effects: severe constipation, serotonin syndrome, anxiety, headache, extrapyramidal symptoms



UTILIZE HER FOUNDATION RESOURCES

Share HER Foundation brochures/packet and support information (hyperemesis.org/info), use HELP Score and HER HG Assessment & Management Clinical Tools (hyperemesis.org/tools). Support: GetHelpNow@HelpHER.org.



YES

Is patient: Eating ≤ 1 meal per day? Dehydrated?
Losing ≥ 2 lbs (1 kg)/week? Not responding to Rx?



NO

INPATIENT CARE

- Weigh every 1-2 days
- Use comfort measures [2](#)
- Rehydrate: IV Fluids + MVI + B complex/thiamin IV + electrolytes (treat mild deficiency)
- Consider midline or central/PICC line
- Begin Enteral/Parenteral Nutrition [2](#)
- Labs: Nutritional panel, electrolytes, urinalysis
- Consults: Nutrition, PT, GI, home health, IV team
- D/C: Intake >1 meal/day + adequate fluid intake OR nutritional therapy + no ketones; maintaining or gaining weight

HOME CARE

- Weigh Monday/Wednesday/Friday
- Complete HELP Score daily
- Daily Enteral/Parenteral Nutrition OR IV Fluids + MVI + B complex/thiamin IV & electrolytes (see rehydration instructions above)
- Weekly Labs if TPN: CMP, electrolytes
- D/C: Intake ≥ 2 meals/day + adequate oral fluids + no ketones

[2](#) see page two for more detailed instructions

OUTPATIENT CARE

FIRST VISIT

- Establish compassionate rapport
- R/O: hydatiform mole (GTD), gall bladder & pancreatic disease, helicobacter pylori, hyperthyroidism
- Labs: Urinalysis, hormone levels, comprehensive metabolic panel (CMP), thyroid panel

EACH VISIT

- Assess with HELP Score & HER Assessment Tools
- Try prenatal with food or iron-free as tolerated
- Weigh at least weekly & trend % weight loss
- Labs prn dehydration: electrolytes, CMP, u/a, ketones
- Encourage active oral care (e.g. water flosser) & eval
- Evaluate & treat additional symptoms (see above)
- Check WE signs (esp. if infusing glucose) [2](#)
- Refer for consults & adjunctive care [2](#)
- Diet: Encourage healthiest food tolerated, add thiamin 50 mg PO BID/TID if high carbohydrate diet
- Review medications [2](#) for tolerance/side-effects
- Monitor thiamin & vitamin K & electrolyte needs

2nd & 3rd TRIMESTER

- Labs: thyroid panel, iron, CMP
- PT consult: weakness/atrophy, birth prep
- Use alternate for Glucola (GTT), e.g. jelly beans, juice

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ANTIEMETIC ESSENTIALS

- 1st: Δ dose/frequency
- 2nd: Δ route (SubQ, TD, compound)
- 3rd: Add/replace a medication
- Avoid abrupt Δ's in 1st trimester
- Wean over 2+ weeks if asymptomatic
- Prevent/proactively treat side-effects
- Cocktail: 1st level meds + 5HT3 antagonist + Reglan or Phenergan

1ST LEVEL MEDS

- Antihistamine
- Acid reducers
- Vitamins B1 & B6 50-100 mg/day
- Rx's successful in previous pg

2ND LEVEL MEDS

- Prokinetics (Reglan* 5-10 mg QID)
- Proton pump inhibitors (PPI)
- Serotonin antagonists (ondansetron 8 mg QID, granisetron 2 mg BID or TD)
- Promethazine* (Phenergan 25mg QID)
- Methylprednisolone (after 8 weeks)
- IV fluids/Nutritional therapy

3RD LEVEL MEDS/EXPERIMENTAL

- Phenothiazines* (e.g. chlorpromazine, prochlorperazine)
- Benzodiazepine (e.g. Diazepam)
- Neuroleptic (e.g. Inapsine)
- Remeron (Mirtazapine)
- Substance P Antagonists (Caution!)
- Anticonvulsants (e.g. Neurontin)
- THC/marijuana (or Dronabinol Rx)
- Clonidine (Transdermal)

Δ = Change

* Prophylax with antihistamines for anxiety; monitor for extrapyramidal symptoms & neuroleptic malignant syndrome

WE/ODS ESSENTIALS

- Causes: Thiamin & electrolyte deficiency/shifts, infection, diuretics
- Signs: Δ in vision or speech or gait or mental status, abdominal pain, headache, cardiac symptoms, somnolence, dizziness, weakness, aphasia, tremor, irritability, spastic paresis, seizure, myalgia, myoclonus, anorexia, dysphagia, elevated transaminase
- Prevention: oral/IV thiamin ≥ 50 mg 1-3x daily; continue postpartum
- Acute Care: Thiamin 100 mg IV up to 1000 mg/day until asymptomatic
- Diagnosis: MRI
- Result: Maternal & fetal morbidity (pre-eclampsia, SIDS), or mortality
- Onset: acute (e.g. IV glucose or electrolytes) or gradual/chronic

WE=Wernicke's encephalopathy
ODS=Osmotic Demyelination Syndrome

TPN/TPPN ESSENTIALS

- Prevent Refeeding Syndrome
- Add MVI + folic acid + B Complex + Phosphorus + Mg + Vit D & K + Ca
- Labs/CMP weekly
- Strict adherence aseptic technique & management protocol
- ⊖ Red flags: chest pain, shortness of breath, temp ≥ 101 F (38.3 C) or ≤ 96.8 F (36 C), redness/swelling/rash

ENTERAL ESSENTIALS

- Prevent Refeeding Syndrome
- Check vitamin K & thiamin dose
- NG/NJ: Use pediatric tube; slow rate
- May need extra IV or fluid boluses

COMFORT MEASURES

- Private room (avoid stimuli)
- Avoid IM injections (atrophy)
- Warm IV fluids/blankets
- Use lidocaine before IVs
- Midline/PICC vs. peripheral IV's
- Offer preferred foods when least ill

CONSULTS/ADJUNCTIVE CARE

- Consults: GI, nutrition, home health, psychology (PTSD), perinatology/MFM
- Adjunctive care: hypnosis, acupuncture, homeopathy, osteopathic adjustment

PATIENT/FAMILY EDUCATION

- Daily: HELP Score, ketostix
- Call if significant Δ in HELP Score
- Coping for psychosocial & debility
- ⊖ Red flag signs: hemataemesis, rapid weight loss, Δ in breathing or gait or vision or mental status, fever, chills, chest pain/arrhythmia, somnolence, oliguria, fainting, severe pain

POSTPARTUM SUPPORT

- Psych: Trauma/PPD support
- Nutrition: Thiamin + prenatal
- Evals: PT, thyroid, GI prn nausea

HG FACTS

- Genetic links to IGFBP7 & GDF15 & RYR2 (cyclic vomiting syndrome)
- Diagnosis: dehydration, poor nutrition, weight loss, debility
- Fetal loss rate: 34%
- Termination rate: 15%
- Maternal Complications: atrophy, esophageal tear/rupture, organ rupture/failure, deconditioning, pneumomediastinum, gall bladder dysfunction, fatty liver, neurological disease, retinal hemorrhage, GI ulcer, premature labor & delivery, PTSD, rhabdomyolysis, severe dental damage, death
- Child Outcomes: IUGR, sensory & emotional & neurodevelopmental & behavioral disorders, vitamin K deficient embryopathy, stillbirth

Kimber's RULE OF 2'S

Wean medications for HG:



Over 2+ weeks

+



After 2+ weeks
without symptoms

+



In 2nd trimester
or later