Hyperemesis Gravidarum

See also N/V in pregnancy

Background

1. Definition
    - Persistent nausea and vomiting during 1st trimester complicated by weight loss or failure to gain wt, dehydration, ketosis, and possible electrolyte imbalances

Pathophysiology

1. Pathology
    - Tend to have higher hCG levels which can cause transient hyperthyroidism
    - Multiple unproven theories
        - Elevated estradiol or progesterone levels
        - GI hypersensitivity
        - Olfactory and immunologic changes of pregnancy
2. Incidence, prevalence
    - Severe hyperemesis occurs in 0.3-2% of pregnancies
    - Higher in Western, civilized, and urban population
3. Risk factors
    - Nulliparity
    - Nonsmoker
    - Younger age
    - Hx of gallbladder dz or gastritis
    - Hx of motion sickness or migraine headaches
    - Multiple gestation
4. Morbidity, mortality
    - Loss of 5% of pre-pregnancy weight increases risk of low birth weight and IUGR
    - Micronutrient deficiency and malnutrition syndrome
    - Wernicke's encephalopathy
    - Esophageal rupture

Diagnostics

1. History
    - Excessive N/V
    - Hyperemesis in previous pregnancy
2. Physical exam
    - Weight loss or lack of wt gain
    - Poor skin turgor
    - Dry mucous membranes
    - Weakness and dizziness
    - Orthostatic BP
3. Diagnostic testing
    - Urinalysis for ketones, specific gravity and evidence of UTI
    - Electrolytes and renal function
    - CBC, LFTs
    - Abdominal ultrasound to look at liver, gallbladder and pancreas

Differential Diagnosis

1. Psychiatric
    - Munchausen's syndrome
    - Conversion or somatization disorder
    - Major depressive disorder
2. Medical
    - Reflux esophagitis
    - Gastritis
    - Cholelithiasis/cholecystitis
    - Hepatitis
    - Urinary tract infection
    - Pancreatitis
    - Obstipation/bowel obstruction

Therapeutics

1. May require hospital admission
2. IV hydration
    - 5% dextrose LR or 5% dextrose NS 1-2 liters over 1-2 hours
3. Antiemetics: most class C but considered safe during all trimesters
    - Promethazine (Phenergan) 25 mg IVP
    - Prochlorperazine (Compazine) 10 mg IVP or 25 mg PR
    - Trimethobenzamide (Tigan) 200 mg IM or PR
    - Metoclopramide (Reglan) 10 mg IVP
    - Ondansetron (Zofran) class B - 4-8 mg IV
4. Other initial management
    - May use for milder cases to avoid admission or for after discharge
    - Maintain hydration orally and with oral antiemetics
    - Small frequent feedings with simple carbohydrates
    - Vitamin B6 (pyridoxine) 25 mg PO tid – available in a variety of formulations including popsicles, suckers and liquid
        - Also in combination with antihistamine doxylamine succinate
    - Temporary d/c of prenatal vitamins and avoidance of environmental and food triggers
    - Emetrol (dextrose, phosphoric acid and levulose) OTC, 2 tablespoons PO q3-4 hours prn
    - Limited or experimental methods
        - Pulsed steroids
            - Prednisone 300 mg daily for 3 days, tapered over 1 week or methylprednisolone 16 mg IV/PO q8 hrs for 3 days
        - Acupuncture
            - 6-8 hr sessions twice weekly for two weeks
        - Ginger
        - Intramuscular ACTH injection

Follow-Up

1. Return to office
    - Weekly visits for weight monitoring
    - Can use home weighing scales with phone follow-up if pt stable
    - Earlier return to office for patients with significant weight loss, continued failure to gain
2. Admit to hospital
    - Persistent weight loss with evidence of fetal compromise
    - Recalcitrant dehydration
    - Electrolyte abnormalities

Prognosis

1. Likely to recur in 20% of subsequent pregnancies, compared to 0.7% of women with no Hx

Prevention

1. Taking multivitamin at the time of conception may decrease frequency and severity of nausea and vomiting.

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