Hyperemesis Gravidarum

Hyperemesis gravidarum is uncontrollable vomiting during pregnancy that results in dehydration and ketosis. Diagnosis is clinical and by measurement of urine ketones, serum electrolytes, and renal function. Treatment is with IV fluids, antiemetics, and temporary suspension of oral intake.

Pregnancy frequently causes nausea and vomiting; the cause appears to be rapidly increasing levels of estrogens or the β subunit of human chorionic gonadotropin (β-hCG). Most cases are morning sickness; ie, women continue to gain weight and do not become dehydrated. Hyperemesis gravidarum is distinguished from morning sickness by weight loss (> 5% of weight) and development of dehydration and ketoacidosis. Psychologic factors (eg, ambivalence, anxiety) may trigger hyperemesis gravidarum. Hyperemesis gravidarum that persists past 16 to 18 wk is uncommon but may seriously damage the liver, causing severe centrilobular necrosis, widespread fatty degeneration, Wernicke's encephalopathy, or esophageal rupture.

Diagnosis
If hyperemesis gravidarum is suspected, urine ketones, thyroid-stimulating hormone, serum electrolytes, AST, ALT, BUN, serum creatinine, Mg, P, and sometimes body weight are measured. Obstetric ultrasonography should be done to rule out hydatidiform mole and multifetal pregnancy. Other disorders that can cause vomiting and that may be hard to diagnose during pregnancy should be considered: eg, hepatitis, pyelonephritis, pancreatitis, intestinal obstruction, GI tract lesions, hyperthyroidism, gestational trophoblastic disease, and increased intracranial pressure. Tests for these disorders are done based on laboratory, clinical, or ultrasound findings.

Treatment
IV 0.9% normal saline solution with 5% dextrose is given, typically about 2 L over 2 h, the 1st liter containing 100 mg of thiamin; subsequent fluid rate requirements vary with patient response but may be as much as 1 L q 4 h or so for up to 3 days. This dose of thiamin should be given daily for 3 days. Electrolyte deficiencies are treated; K, Mg, and P are replaced as needed. Care must be taken not to correct low plasma Na levels too
quickly as this can cause central pontine myelinolysis. At first, patients are given nothing by mouth. Vomiting that persists after initial fluid and electrolyte replacement is treated with an antiemetic (eg, pyridoxine 10 to 25 mg po tid; promethazine 12.5 to 25 mg po, IM, or rectally q 4 to 8 h; metoclopramide 5 to 10 mg IV or po q 8 h; ondansetron 8 mg po or IM q 12 h; prochlorperazine 5 to 10 mg po or IM q 3 to 4 h).

After dehydration and acute vomiting resolve, small amounts of oral liquids are given. Patients who cannot tolerate any oral fluids after IV rehydration and antiemetics may need to be hospitalized or given home IV therapy and take nothing by mouth for a longer period (sometimes several days or more). Once patients tolerate fluids, they can eat small, bland meals, and diet is expanded as tolerated. IV vitamin therapy is required initially and until vitamins can be taken by mouth. If treatment is ineffective, total parenteral nutrition or corticosteroids may be necessary. If progressive weight loss, jaundice, or persistent tachycardia occurs despite treatment, termination of the pregnancy should be considered.