Protean Presentations of Pregnancy

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Introduction

Case vignette: A 27 year- old female is an inpatient on the psychiatry floor admitted for suicidal ideation and depression. During a routine exam to prepare the patient for electro- convulsive therapy, the staff notes that the patient is jaundiced, with complaints of itching. Also noted are small pedunculated lesions on her gums, and complaints of oral mucosal discomfort and increased salivation. An Internal Medicine consult is requested to evaluate and treat these medical issues. The astute Internal Medicine resident asks about the patient's last menstrual period and learns it was 7-10 days ago. A urine pregnancy test revealed the patient was pregnant.

A large proportion of women do not realize they are pregnant until well into their first trimester. Thus, diagnosing a patient with an "unexpected pregnancy" is hardly a rare event. One must maintain a high level of suspicion for diagnosing pregnancy when evaluating any female patient in her reproductive years. As will be illustrated in the next section, the presenting features of pregnancy are indeed protean.

Presenting Features of Pregnancy

There are a number of signs and symptoms of pregnancy that readily disclose the diagnosis and facilitate appropriate management. These well-known signs and symptoms include complaints of nausea, fatigue, amenorrhea, and breast tenderness. However, it may also be helpful to review some of the more unusual signs and symptoms to facilitate an early accurate diagnosis. Pregnancy can affect virtually every organ system as described below:

Gynecological**:** vaginal bleeding, pelvic pain, leukorrhea, amenorrhea

Gastrointestinal**:** nausea, vomiting, heartburn, constipation, ptyalism, intrahepatic cholestasis with jaundice, pruritus and hepatomegaly.

Cardiac**:** tachycardia, flow murmur, decrease in blood pressure, left axis deviation on EKG and pregnancy induced hypertension

Vascular**:** spider telangiectasias, palmar erythema, nonpitting edema, varicosities, vasomotor instability, gingivial hyperemia, hemorrhoids.

Respiratory**:** dyspnea, partially compensated respiratory alkalosis, PCO2 decrease by 10mm, worsening of asthma in 1/3 of patients.

Hematological**:** anemia (mean hemoglobin is 10.2-11.6 in pregnancy), increase in WBC with small left shift, increase in coagulable factors (VII, VIII, IX and X), slightly decreased platelet count, increased ESR from increased fibrinogen levels.

Endocrine**:** increased insulin resistance, increased serum level of Thyroid Binding Globulin resulting in increased total T3 and T4.

Renal**:** increased risk of pyelonephritis, asymptomatic bacteruria, and cystitis, urinary frequency, increase in GFR with subsequent glucosuria and decrease in BUN/creatinine.

Dermatoses**:** hyperpigmentation, melasma, hirsutism, nail changes (subungual hyperkeratosis, distal onycholysis, transverse grooving and brittleness), striae, gingivitis, pruritic uticarial papules and plaques of pregnancy (incidence 1 in 130).

Medical Complications in Pregnancy Leading to Maternal Morbidity and Mortality

Venous Thromboembolism (VTE): This includes deep venous thrombosis (DVT) and pulmonary embolism (PE). The leading cause of maternal mortality in the United States is pulmonary embolism

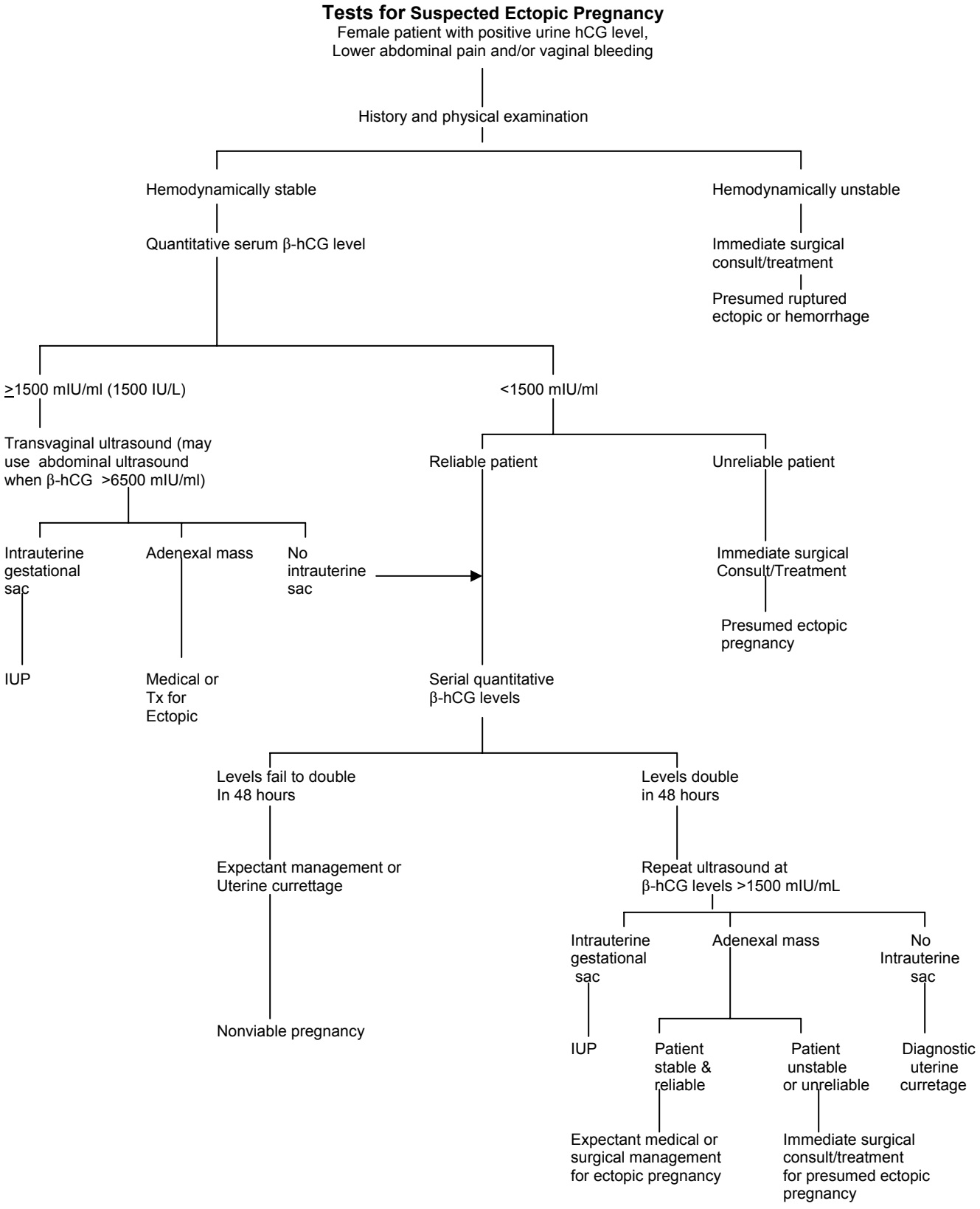
*Incidence***:** VTE is five times more likely to occur during pregnancy. Pregnancy is a risk factor for VTE, as every element of Virchow's triad (stasis, endothelial damage and hypercoaguability) is present.

*Risk factors***:** Previous VTE with pregnancy; trauma/prolonged immobilization; atrial fibrillation; morbid obesity; antiphospholipid antibodies; Antithrombin III, Factor V, Protein C and S deficiency.

*Diagnosis***:** Ventilation-perfusion scan is a first line test for confirming PE. Spiral CT scan is an alternative where the technique is available. Pulmonary angiography is the gold standard. For suspicion of DVT, duplex doppler scanning is the preferred initial test. Consider repeat Doppler for follow-up in 2-3 days to detect thrombi not previously visualized.

Treatment: Unfractionated heparin is the mainstay of treatment (it does not cross the placenta). Note a higher dose is required secondary to increased volume of distribution and renal clearance in pregnancy. Guidelines for anticoagulation are listed below.

Figure 1. Diagnostic studies used in the evaluation of suspected ectopic pregnancy. (hCG = human chorionic gonadotropin; beta-hCG = beta-subunit of hCG; IUP = intrauterine pregnancy**)** from reference #5.



Loading dose: 80 units/kg (or 5000 units) IV bolus

Continuous heparin infusion of 1300 units/hour for DVT and 1500U/hr for PE

Check PTT q 6 hours to maintain PTT between 1.5 and 2.5 times baseline

Check platelets q day or qod to monitor for heparin-induced Thrombocytopenia. It is important to remember that Coumadin is teratogenic.

Ectopic Pregnancy

Ruptured ectopic pregnancy is the leading cause of maternal mortality in the first trimester and accounts for 10-15% of all maternal deaths.

Incidence: Occurs in 2% of all pregnancies in the United States with as many as

50% of patients misdiagnosed on their initial visit to a physician.

Clinical Presentation: Symptoms are often nonspecific. Abdominal pain with amenorrhea is the most common presenting complaint. Vaginal bleeding is present in only 40-50% of patients and may often be mistaken for a normal menstrual period. Other symptoms may include pain radiating to shoulder, syncope and/or hypovolemic shock. Physical findings may include a normal or slightly enlarged uterus, abdominal tenderness (75%), cervical motion tenderness (66%), palpable adnexal mass (50%) and hemodynamic compromise in about 20% of patients.

Risk Factors: History of pelvic inflammatory disease, previous ectopic, endometriosis, previous tubal surgery, previous pelvic surgery, infertility and infertility treatments, uterotubal anomalies, and cigarette smoking.

Diagnosis: See figure 1- Tests for Suspected Ectopic Pregnancy

Treatment: Laparoscopic techniques for unruptured ectopic include salpingectomy or salpingostomy. Laparotomy is the preferred technique in the hemodynamically unstable patient. Methotrexate therapy can be used for small unruptured ectopic (less than 3.5 cm in greatest dimension) pregnancies in the hemodynamically stable patients.

Summary

This brief chapter outlined the less common signs and symptoms of pregnancy. It also reviewed two major life-threatening complications that should not be missed in the potentially pregnant patient. In summary, every female patient in her reproductive years should be considered pregnant until proven otherwise.

References

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