

HYPOTHYROIDISM

The goal of therapy for hypothyroidism is to maintain the serum TSH in the normal range, and thyroxine is the drug of choice. During pregnancy, the dose of thyroxine required to keep the TSH in the normal range rises. In one study, the mean replacement dose of thyroxine required to maintain the TSH in the normal range was 0.1 mg daily before pregnancy and increased to 0.15 mg daily during pregnancy. Since the increased thyroxine requirement occurs as early as the fifth week of pregnancy, one approach is to increase the thyroxine dose by 30% (two additional pills weekly) as soon as pregnancy is diagnosed and then adjust the dose by serial measurements of TSH.

HEMATOLOGIC DISORDERS

Pregnancy has been described as a state of physiologic anemia. Part of the reduction in hemoglobin concentration is dilutional, but iron and folate deficiencies are major causes of correctable anemia during pregnancy.

In populations at high risk for hemoglobinopathies (Chap. 127), hemoglobin electrophoresis should be performed as part of the prenatal screen. Hemoglobinopathies can be associated with increased maternal and fetal morbidity and mortality. Management is tailored to the specific hemoglobinopathy and is generally the same for both pregnant and nonpregnant women. Prenatal diagnosis of hemoglobinopathies in the fetus is readily available and should be discussed with prospective parents either prior to or early in pregnancy.

Thrombocytopenia occurs commonly during pregnancy. The majority of cases are benign gestational thrombocytopenias, but the differential diagnosis should include immune thrombocytopenia (Chap. 140), thrombotic thrombocytopenic purpura, and preeclampsia. Maternal thrombocytopenia may also be caused by DIC, which is a consumptive coagulopathy characterized by thrombocytopenia, prolonged prothrombin time (PT) and activated partial thromboplastin time (aPTT), elevated fibrin degradation products, and a low fibrinogen concentration. Several catastrophic obstetric events are associated with the development of DIC, including retention of a dead fetus, sepsis, abruptio placentae, and amniotic fluid embolism.

NEUROLOGIC DISORDERS

Headache appearing during pregnancy is usually due to migraine (Chap. 21), a condition that may worsen, improve, or be unaffected by pregnancy. A new or worsening headache, particularly if associated with visual blurring, may signal eclampsia (above) or pseudotumor cerebri (benign intracranial hypertension); diplopia due to a sixth-nerve palsy suggests pseudotumor cerebri (Chap. 39). The risk of seizures in patients with epilepsy increases in the postpartum period but not consistently during pregnancy; management is discussed in Chap. 445. The risk of stroke is generally thought to increase during pregnancy because of a hypercoagulable state; however, studies suggest that the period of risk occurs primarily in the postpartum period and that both ischemic and hemorrhagic strokes may occur at this time. Guidelines for use of heparin therapy are summarized above (see “Deep Venous Thrombosis and Pulmonary Embolism”); warfarin is teratogenic and should be avoided.

The onset of a new movement disorder during pregnancy suggests *chorea gravidarum*, a variant of Sydenham’s chorea associated with rheumatic fever and streptococcal infection (Chap. 381); the chorea may recur with subsequent pregnancies. Patients with preexisting *multiple sclerosis* (Chap. 458) experience a gradual decrease in the risk of relapses as pregnancy progresses and, conversely, an increase in attack risk during the postpartum period. Disease-modifying agents, including interferon β , should *not* be administered to pregnant multiple sclerosis patients, but moderate or severe relapses can be safely treated with pulse glucocorticoid therapy. Finally, certain tumors, particularly pituitary adenoma and meningioma (Chap. 403), may manifest during pregnancy because of accelerated growth, possibly driven by hormonal factors.

Peripheral nerve disorders associated with pregnancy include *Bell’s palsy* (idiopathic facial paralysis) (Chap. 459), which is approximately threefold more likely to occur during the third trimester and immediate postpartum period than in the general population. Therapy with glucocorticoids should follow the guidelines established for nonpregnant patients. Entrapment neuropathies are common in the later stages of pregnancy, presumably as a result of fluid retention. *Carpal tunnel syndrome* (median nerve) presents first as pain and paresthesia in the hand (often worse at night) and later with weakness in the thenar muscles. Treatment is generally conservative; wrist splints may be helpful, and glucocorticoid injections or surgical section of the carpal tunnel can usually be postponed. *Meralgia paresthetica* (lateral femoral cutaneous nerve entrapment) consists of pain and numbness in the lateral aspect of the thigh without weakness. Patients are usually reassured to learn that these symptoms are benign and can be expected to remit spontaneously after the pregnancy has been completed. *Restless leg syndrome* is the most common peripheral nerve and movement disorder in pregnancy. Disordered iron metabolism is the suspected etiology. Management is expectant in most cases.

GASTROINTESTINAL AND LIVER DISEASE

Up to 90% of pregnant women experience nausea and vomiting during the first trimester of pregnancy. *Hyperemesis gravidarum* is a severe form that prevents adequate fluid and nutritional intake and may require hospitalization to prevent dehydration and malnutrition.

Crohn’s disease may be associated with exacerbations in the second and third trimesters. Ulcerative colitis is associated with disease exacerbations in the first trimester and during the early postpartum period. Medical management of these diseases during pregnancy is similar to management in the nonpregnant state (Chap. 351).

Exacerbation of gallbladder disease is common during pregnancy. In part, this aggravation may be due to pregnancy-induced alteration in the metabolism of bile and fatty acids. Intrahepatic cholestasis of pregnancy is generally a third-trimester event. Profound pruritus may accompany this condition, and it may be associated with increased fetal mortality. Placental bile salt deposition may contribute to progressive uteroplacental insufficiency. Therefore, regular fetal surveillance should be undertaken once the diagnosis of intrahepatic cholestasis is made, and delivery should be planned once the fetus reaches about 37 weeks of gestation. Favorable results with ursodiol have been reported.

Acute fatty liver is a rare complication of pregnancy. Frequently confused with the HELLP syndrome (see “Preeclampsia” above) and severe preeclampsia, the diagnosis of acute fatty liver of pregnancy may be facilitated by imaging studies and laboratory evaluation. Acute fatty liver of pregnancy is generally characterized by markedly increased serum levels of bilirubin and ammonia and by hypoglycemia. Management of acute fatty liver of pregnancy is supportive; recurrence in subsequent pregnancies has been reported.

All pregnant women should be screened for hepatitis B. This information is important for pediatricians after delivery of the infant. All infants receive hepatitis B vaccine. Infants born to mothers who are carriers of hepatitis B surface antigen should also receive hepatitis B immune globulin as soon after birth as possible and preferably within the first 72 h. Screening for hepatitis C is recommended for individuals at high risk for exposure.

INFECTIONS

BACTERIAL INFECTIONS

Other than bacterial vaginosis, the most common bacterial infections during pregnancy involve the urinary tract (Chap. 162). Many pregnant women have asymptomatic bacteriuria, most likely due to stasis caused by progesterational effects on ureteral and bladder smooth muscle and later in pregnancy due to compression effects of the enlarging uterus. In itself, this condition is not associated with an adverse outcome of pregnancy. However, if asymptomatic bacteriuria is left untreated, symptomatic pyelonephritis may occur. Indeed, ~75% of pregnancy-associated pyelonephritis cases are the result of untreated asymptomatic bacteriuria. All pregnant women should be screened