

125. Heart Disease

Etiology/Pathophysiology

- Atherosclerotic heart disease is a spectrum of disease with narrowed coronary arteries, cholesterol plaques, and fibrotic tissue in the vascular intima
- Results in angina, myocardial infarction (MI), and congestive heart disease (CHF)
- Epidemiology
 - Women's risk of heart disease increases two-fold after menopause
 - Peak incidence is age 60–70
 - Cardiovascular disease kills more women than any other disease and accounts for 45% of all deaths in women
- Risk factors in women include diabetes mellitus, hypertension, tobacco, total cholesterol >240 mg/dL, HDL <35 mg/dL, sedentary lifestyle, obesity, family history with MI before age 60, age >55 years, and black or Hispanic race
- Oral contraceptive pill use is known to increase the risk of acute MI in women who smoke and/or are hypertensive; however, there is no evidence of increased risk in women without risk factors

Differential Dx

- GI disease: Gastric ulcer, esophagitis, gastroesophageal reflux, cholecystitis
- Pulmonary embolism
- Chest wall disease: Costochondritis, herpes zoster, thrombophlebitis
- Lung disease: Pleuritis, pleural adhesions, pneumothorax
- Infectious cardiomyopathy
- Aortic aneurysm
- Pericarditis
- Mitral valve prolapse

Presentation

- Substernal chest pain
- Dyspnea on exertion
- Paroxysmal nocturnal dyspnea
- Orthopnea
- Edema
- Murmur
- Women are more likely than men to be asymptomatic or present with atypical symptoms during MI
- Atypical symptoms of acute MI include nausea, vomiting, fatigue, and malaise

Diagnosis/Evaluation

- Laboratory studies for the diagnosis of MI include elevation of cardiac enzymes (CPK, CPK isoenzymes, SGOT, LDH, troponin)
- Serum risk factors include elevated triglycerides, cholesterol, LDL, glucose, and hemoglobinA_{1c}; decreased HDL
- EKG may reveal ST segment depression or elevation and/or T wave inversion
- Exercise EKG stress testing has low cost and has been shown to be effective in women
- Exercise echocardiography may reveal wall motion abnormalities; more sensitive and specific for CAD than exercise EKG
- Pharmacologic stress echocardiography is useful in women who are not able to exercise
- Angiography may reveal narrowing of coronary arteries (significant stenosis is >75%)
- Cardiac catheterization

Treatment

- Prevent further progression of disease by treating hypercholesterolemia and controlling blood pressure and diabetes; initial management of these conditions includes encouraging dietary modification, regular exercise, and smoking cessation
- Hormone replacement therapy: The use of estrogen and progestin are not effective in primary or secondary prevention of heart disease
- Women benefit from use of aspirin and β -blockers for secondary preventive therapy
- Thrombolytics must be used cautiously as women have a higher risk of stroke and hemorrhage than in men
- Revascularization: Due to the smaller size of women's vessels, there is a higher technical failure rate in women than in men

Prognosis/Complications

- Long-term prognosis depends on severity of underlying disease and the patient's co-morbidities
- Complications include MI, CHF, arrhythmias and sudden death
- Women tend to present with more advanced CAD than men
- Women who suffer MI are three times as likely to die from the ischemic event or complications than their male counterparts
- Yentl syndrome: Women with undocumented coronary artery disease are treated less aggressively than men (women have lower rates of hospitalization and cardiac catheterization); however, heart disease and MI in women are as significant a health risk as in men