ATHEROSCLEROSIS - HYPERLIPIDEMIA

Date: Monday, September 24, 2018, 10:30 am

Reading Assignment: Robbins Basic Pathology (Kumar, Abbas, Aster), 9th Ed., Ch. 9, Blood Vessels, pp. 335 – 344. Further reading (NOT REQUIRED) on atherosclerosis (AS), cardiovascular risk factors and their relationship to AS:

EDUCATIONAL GOAL AND OBJECTIVES

I. Educational Goals

Upon completion of this lecture and reading assignment, you will be able to describe basic pathologic and clinical features in the development and progression of AS as well as to explain the role of clinical laboratory testing in evaluating cardiovascular disease risk factors (RF) that lead to the progression of AS.

II. Educational Objectives

To attain the educational goals, you will be able to

1. Describe the vascular pathologic and molecular features associated with development and progression of AS focusing on vascular changes and growth of atherosclerotic plaques.

2. Relate non-modifiable and modifiable major RF’s as well as minor RF’s to increased risk for AS disease progression.

3. Explain why abnormalities in blood levels of lipids, lipoproteins and other cardiovascular risk factors increases an individual’s risk for complications arising from advanced AS.

4. List key features of the prevailing theory of atherogenesis, i.e., the ‘response-to-injury’ hypothesis. Correlate this theory with clinical features observed in a patient with AS.
III. Learning Objectives

To attain these goals you will be able to:

1. Describe the progressive types of lesions observed in the blood vessel walls of patients with AS from fatty streaks to complex atheromatous plaques.

2. List 4 major AS risk factors that are non-modifiable and five major AS risk factors that are modifiable (controllable).

3. Identify the five key steps or components of the 'response-to-injury' hypothesis in the proper sequence and explain the role of progressive inflammation in this theory.

4. Describe significant clinical manifestations of AS.

5. Compare the basic roles of LDL and HDL in lipoprotein metabolism and the relationship of each to risk of AS.

6. Recognize the major genetic (genotypic) hyperlipoproteinemia and the associated lipoprotein abnormalities in patients with familial hypercholesterolemia (Type II).

7. Explain why elevated high sensitivity C-reactive protein levels may be associated with AS and CHD.

8. List 5 predictive factors used to assess 10-year coronary heart disease risk based on the NCEP’s ATP III guidelines.