

## **Suggested Reading**

Basic Pathology, by Kumar, Cotran, Robbins, Seventh Edition

## **Course Objectives**

### **I. Endocrine Pancreas - Diabetes Mellitus (pages 641-655)**

At the completion of these lectures the students should be able to define and understand:

1. Comparison and contrast between type 1 and type 2 diabetes mellitus with regards to a) etiology b) incidence c) age at onset d) oral glucose tolerance test e) role of genetics f) insulin receptor status g) treatment h) complications
2. Normal insulin physiology
3. Insulin resistance
4. Insulin receptors
5. Pathogenesis of type 1 diabetes, including genetic susceptibility, autoimmune, and environmental factors
6. Pathogenesis of type 2 diabetes, including insulin resistance, obesity and amylin
7. Morphology of diabetes
8. Difference in cardiovascular disease amongst diabetics and non-diabetics
9. Clinical and pathological findings in diabetic nephropathy
10. Complications of diabetes

**Review Questions – Endocrine Pancreas**

1. A 65-year-old diabetic woman was admitted with shock. Her skin felt as dry as bone. The most likely diagnosis is:

- A. Hypoglycemia
- B. Hyperglycemia
- C. Normoglycemia with heat stroke
- D. Too much insulin
- E. Overhydration

2. All of the following statements regarding possible late complications of diabetes mellitus are true except:

- A. Myocardial infarction, is the most common cause of death in diabetics
- B. Diabetic microangiopathy means thickening of the cornea
- C. Gangrene of the foot occurs due to advanced vascular disease
- D. In diabetic nephropathy the glomerular capillary basement membranes are thickened
- E. Proliferative nephropathy is a process of neovascularization and fibrosis

3. All the following are features seen in type I diabetes mellitus except:

- A. HLA-D link
- B. Ketoacidosis is rare
- C. Insulinitis occurs early
- D. Severe  $\beta$ -cell depletion
- E. Normal weight

4. A 25 year-old male recovering from abdominal surgery for appendicitis presented to the emergency room with vomiting and dehydration. The serum sodium and serum potassium level was low. Since the surgery, in spite of increased appetite he had been losing weight and felt weak. He had also noticed that the frequency of his micturition had increased. All of the following statements are true except:

- A. There is an association with HLA-DR3 or HLA-DR4
- B. Reduction in the number and size of the islets
- C. Classic triad of this disease is polyuria, polydipsia and polyphagia
- D. Thyrotoxicosis is in the differential diagnosis when dealing with an unknown case
- E. He can be treated completely by avoiding fatty food

*Answers*

- 1. B
- 2. B
- 3. B
- 4. E