1 Primary Etiology: Stroke
   - disruption of blood flow
   - CVA - cerebral vascular accident
   - neurologic insult
   - 1-2 million living with stroke
   - third cause of death
   - first cause of disability
   - incidence increases with age
   - annual incidence decreasing

2 Risk Factors
   - heart disease
   - arrhythmias
   - D.M.
   - smoking
   - obesity
   - transient ischemic attacks (TIA’s)

3 Outcome
   - mortality
   - survival

4 How does a stroke occur?
   - Pathologic condition of blood vessel
     - ischemia
     - hemorrhage

5 Ischemia
   - 80% of all strokes
   - blood flow reduction: complete or partial
   - primary medical condition - atherosclerosis

6 Atherosclerosis (ATHSD)
   - vascular disease
   - build up of cells in arterial wall
   - lipid (fat)

7 Disease Process
   - vascular site of injury
   - platelet adhesion
   - stenosis: narrowing of lumen
   - 70% critical
   - thrombus
   - emboli
8  ❙ Evolution of Ischemia
   ■ develops over time - stroke in evolution
   ■ symptoms present on awakening
   ■ frequently preceded by TIA’s

9  ❙ TIA’s
   ■ brief focal dysfunction of vascular origin
   ■ symptoms less then 24 hours
   ■ caused by small emboli

10 ❙ Hemorrhage
   ■ rupture of blood vessel
   ■ bleeding
   ■ 2 types
     – intracerebral
       ▪ small penetrating arteries in and around thalamus
     – extracerebral
       ▪ extracerebral spaces: SAH, sub or epidural

11 ❙ Causes
   ■ aneurysm
   ■ arteriovenous malformation
   ■ trauma

12 ❙ Disease Process
   ■ mass displacement
   ■ increased pressure
   ■ tissue distraction
   ■ vasospasm

13 ❙ Evolution
   ■ onset during activity
   ■ sudden with severe headache
   ■ rapid deterioration of consciousness
   ■ mortality high with SAH