1. **Pathophysiology**
   - Primary lesion is an intimal tear
   - Blood dissects in between the layers of the arterial wall (false lumen)
   - Resulting in narrowing / obliteration of the true lumen
   - Neurological symptoms: TIA, stroke

2. **Aetiology**
   2.1. **Spontaneous (60-70%)**
      - Idiopathic
      - Secondary to underlying arterial abnormality
        - Atherosclerotic plaque
        - Fibromuscular dysplasia
        - Ehlers Danlos Syndrome
        - Marfan’s Syndrome
        - Severe unfolding of the carotid arteries: Kinks and coils
      - Risk factors: hypertension, atherosclerosis, tobacco, oral contraception, family history
   
   2.2. **Post traumatic (30-40%)**
      - MVA – “Whip lash”
      - Direct trauma to the carotid artery
      - Rotation-extension injury:
        - Most often relatively minor injury, involving rotation-extension of the neck: wrestling, martial arts, chiropractic manipulation, etc
      - The traumatic event may precede symptoms by months
      - Dissection of the thoracic aorta (Stanford Type A) may extend into the arch branches causing obstruction of the carotid arteries and cerebral symptoms

3. **Clinical presentation**
   - Symptoms of focal cerebral ischaemia: hemiparesis, aphasia, amaurosis fugax
   - Hemicranial or retro-orbital headache
   - Carotodinia, unilateral neck pain
   - Pulsatile tinnitus
   - Incomplete Horner syndrome: miosis, ptosis, without anhidrosis

Carotid dissection should be suspected in any patient who presents with craniocervical pain and Horner/amaurosis fugax.
4. **Diagnostic findings**
   - Duplex Doppler ultrasound: flap, thrombus, ↓ flow velocity
   - Arteriography: gold standard: double lumen, luminal tapering, string sign, flap, thrombus
   - CTA/MRA
   - CT of the brain to exclude haemorrhagic cerebral infarct (contra-indication to anti-coagulation)

5. **Treatment**
   5.1. **Medical:** most patients respond to conservative treatment
       - Anti-coagulation: mainstay of treatment
         - Initial heparin anticoagulation
         - Warfarin 6 months
         - Lifelong aspirin treatment
       - Follow-up radiological evaluation after 6 months
       - 60-85% Of dissections will recanalize within 6 months

   5.2. **Surgery:**
       - Seldom indicated, but for:
         - Progressive/persistent TIA = ongoing embolisation
         - Low flow in a patient where anticoagulation is contra-indicated
       - With limited dissection → resection with graft or venous replacement
       - With extensive dissection (to the base of the skull)
         → ligation of the proximal ICA if stump pressure is adequate