Hydrocephalus

- Obstructive hydrocephalus
  o Excess fluid in the ventricles resulting in dilation of ventricles and enlargement of the head
  o Can be caused by overproduction of CSF, block to flow, or interference with absorption
  o Usually occurs in cerebral aqueduct
- Communicating hydrocephalus
  o Movement of CSF into venous system is blocked
  o Due to congenital absence of arachnoid granulations, or blockage of granulations by haemorrhage

Leakage of CSF

- Fractures in the floor of the middle cranial fossa can cause CSF leakage into external acoustic meatus (CSF otorrhea)
- Fractures in floor of anterior cranial fossa can cause CSF leak into nose (CSF rhinorrhoea); fractures in cribiform plate
- Increased risk of meningitis

Anastomoses of cerebral arteries and cerebral embolism

- Branches of the three cerebral arteries anastomose; if one is obstructed by a cerebral embolism, the anastomoses are not able to compensate
- Cerebral ischemia and infarction

Strokes

- Impairment of cerebral blood flow can cause ischemic stroke e.g. embolism
- Spontaneous cerebrovascular accidents e.g. thrombosis, cerebral haemorrhage, embolism, subarachnoid haemorrhage
- Haemorrhagic stroke usually due to artery rupture due to an aneurysm – most commonly a berry aneurysm

Brain infarction

- An atheromatous plaque can result in narrowing of an artery and stenosis, restricting blood flow to the brain
- An embolus can break off and lodge in a small artery – infarction to that area of the brain

Transient ischemic attacks

- Neurologic symptoms due to ischemia, can be caused by stenosis of arteries
- Increased risk for strokes
Reference