WHAT IS IT?

- Subarachnoid haemorrhage occurs when an artery under the arachnoid mater membrane surrounding the brain ruptures and blood leaks into the cerebrospinal fluid.
- The condition is potentially life-threatening and requires urgent medical attention.
- Subarachnoid haemorrhage is more common in women and older people (Brain Australia, 2003).

CAUSES

- Most subarachnoid haemorrhages are caused by a ‘berry’ aneurysm at a junction in the blood vessels.
- Berry aneurysms are present in about one per cent of the population, although only a very small proportion of these rupture.
- Arteriovenous malformation – a tangled mass of blood vessels linking arteries and veins present from birth – is a less common cause of subarachnoid haemorrhage.
- Smoking, hypertension and an alcohol consumption of >150g per week have been associated with increased risk of subarachnoid haemorrhage.

DIAGNOSIS

- Initial diagnosis is usually based on the characteristic symptoms. Other tests are used to confirm the diagnosis and decide on treatment options. These include:
  - Computerised tomography (CT) scan to show the source and quantity of bleeding;
  - Magnetic resonance imaging (MRI) and/or angiogram to locate the berry aneurysm if this is the cause of the haemorrhage;
  - Lumbar puncture to examine cerebrospinal fluid for the presence of blood.

SYMPTOMS

- Excruciating headache, usually of sudden onset, often at the back of the head.
- Nausea and vomiting.
- Tiredness.
- Loss of consciousness.
- Seizures.
- Confusion.
- Other symptoms may include stiff neck and aversion to bright light.
- Symptoms vary and depend on the severity of the haemorrhage. They are often similar to those associated with meningitis.

TREATMENT

- Subarachnoid haemorrhage is an emergency and the patient must be transferred to hospital immediately.
- The timing of surgery depends on the patient’s condition.
- If the cause of haemorrhage is a berry aneurysm, craniotomy is usually required to seal off the aneurysm and prevent future bleeds.
- Alternatively, the aneurysm may be accessed arterially through a procedure known as endovascular embolisation or coiling.
- If the haemorrhage is due to arteriovenous malformation this will be removed by craniotomy.
- Some patients have additional aneurysms and may need further surgery to prevent future bleeds.
- Drugs will be prescribed as necessary for analgesia, to reduce the risk of vasoconstriction, control seizures or decrease blood pressure.

COMPLICATIONS

- Aneurysm rupture is fatal in 40 per cent or more cases.
- Half of survivors experience stroke-like deficits such as speech disturbance, weakness on one side of the body or double vision.
- Vasospasm in the days following haemorrhage may result in stroke.
- Postoperative jaw stiffness, headaches, pain or numbness around the scar may be experienced temporarily but should decrease.
- Occasionally epileptic seizures or hydrocephalus may occur.
- Intensive physical, occupational and speech therapy will help, but recovery may be slow and uneven.

REFERENCES


WEBSITE

NHS Direct: www.nhsdirect.nhs.uk