

PQ PATIENT QUESTIONS

1.8 What is a stroke?

A stroke is a type of injury to the brain. It is characterised by the sudden loss of function of a particular part of the body because of a sudden interruption in the flow of blood to a part of the brain.

The word 'stroke' was originally short for 'stroke of apoplexy'. 'Apoplexy' is derived from the Greek word meaning to be struck down, as if by a thunderbolt.

1.9 Why does a stroke occur?

A stroke occurs when there is a sudden interruption to the flow of blood to part of the brain.

This is usually caused by a blockage in a blood vessel (artery) carrying blood to the brain. The blockage stops the blood getting to the part of the brain supplied by that artery, which damages it, because the brain needs a constant supply of oxygen and glucose (sugar) for it to function properly, and the oxygen and glucose is normally delivered to the brain constantly in the blood stream. Therefore, if the blood supply (and thus oxygen and glucose supply) to a part of the brain is shut off for more than a few minutes, then that part of the brain ceases to function properly. If the disturbance in blood supply to a part of the brain is not corrected after a few hours, that part of the brain may die (cerebral/brain infarction), and permanently cease to function. This is called an ischaemic stroke (see below).

Less commonly, an artery bursts and blood spurts out into the brain tissue or over the surface of the brain, causing a bruise in, or over, the brain. This is called a haemorrhagic stroke. A bleed into the brain tissue is called an intracerebral haemorrhage, and a bleed over the surface of the brain is called a subarachnoid haemorrhage (see below). Because the blood spurts out of the ruptured artery under high pressure (equivalent to the blood pressure), it tears some of the brain tissue (which is normally soft) and forms a mass of blood (a haematoma; like a big blood clot), which squashes the normal surrounding brain, preventing it from receiving any nourishing blood supply from other blood vessels. The rim of brain surrounding the haematoma may therefore die.

1.10 What is a transient ischaemic attack?

A transient ischaemic attack (TIA) is a mini-stroke. Like an ischaemic stroke, it is characterised by the sudden loss of function of a particular part of the body because of a sudden lack of blood flow to a part of the brain. The symptoms of a TIA, and its causes, are therefore the same as those of an ischaemic stroke. However, unlike an ischaemic stroke, the symptoms of abnormal function of a part of the body and brain recover completely within 24 hours. This is because the blockage of the artery clears itself very quickly, before the ischaemic brain tissue has died (infarcted).

1.11 Why are transient ischaemic attacks important?

Transient ischaemic attacks are important because they are a 'tap on the shoulder' for the patient, notifying them that they are at increased risk of a future stroke (and heart attack) and that, with appropriate treatment, their risk of having a major disabling or fatal stroke or heart attack can be reduced.