

# Brief Review on the General Features of Haemorrhagic Versus Ischemic Strokes

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## Abstract

Ischemic and hemorrhagic strokes are common pathologies in neurological and neurosurgical settings. This is a brief review on their presentation, incidence, pathophysiology and initial treatment.

**Key Words:** haemorrhagic – ischemic - stroke

Hemorrhagic strokes account for about fifteen to twenty percent of strokes while ischemic strokes incidence would be about eighty to eighty-five percent of strokes. Hemorrhagic strokes can be occurred due to bleeding diathesis, trauma, severe hypertension, arteriovenous malformations and berry aneurysms rupturing. Intracranial atherosclerosis, atherothrombosis of large arteries, small and penetrating vessels lipohyalinosis and brain embolism may cause ischemic strokes. In hemorrhagic strokes the occurrence of transient ischemic attacks is not common and the neurologic deficit would not be limited to one specific territory of vessels. Decreased level of consciousness, vomiting and headache are common in hemorrhagic strokes. In ischemic strokes, transient ischemic attacks may occur in about thirty to fifty percent of cases. Usually the neurologic deficit would occur in one vascular territory distribution. The occurrence of decreased level of consciousness and headache is not common in ischemic strokes. In hemorrhagic strokes the initial treatment consists of bleeding diathesis and blood pressure controlling and large hematomas drainage with surgery in intracranial haemorrhage. In subarachnoid hemorrhage, vasospasm prevention with nimodipine, arteriovenous malformations embolization or excision and berry aneurysms coating, clipping, coiling or trapping may be done for initial treatment. In case the extradural or subdural hematoma would be large in size, drainage of the hematoma with surgery would be the initial treatment. In ischemic strokes, cardiogenic embolism may be treated with using tPA, MERCI

(Mechanical Embolus Removal in Cerebral Ischemia) device, heparin or aspirin. Atherothrombosis of large arteries may be treated with tPA and aspirin. Controlling of blood pressure and treatment with empiric antiplatelets may be used as initial treatment for lacunar strokes.

It is important for the clinicians to have enough knowledge about hemorrhagic and ischemic strokes to approach such pathologies appropriately in clinical settings.

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