



LECTURE

Spontaneous intraventricular haemorrhage

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From the Porto University Center of Medicine Stroke Update Course, Porto, Portugal. 20–21 June 2017.

Abstract

Intraventricular haemorrhage (IVH) comprises a very wide range of situations: from a minor deposition of blood in the occipital horns, to the complete filling of the ventricular system with a clot. Intraventricular blood can be caused by the drainage into the ventricular system of spontaneous intracerebral haemorrhage or, in case of subarachnoid haemorrhage, by the circulation of the blood together with the cerebrospinal fluid (CSF).

The symptoms are similar to any haemorrhagic stroke: headache, vomiting, stiff neck, with or without altered state of consciousness.

The main causes of IVH are arterial hypertension, rupture of arteriovenous malformations (AVMs) or aneurysms (for example, anterior communicating, anterior choroid or posterior inferior cerebellar arteries) and bleeding of sub-ependymal cavernomas or intraventricular tumours. Other causes are related to coagulation disorders such as hypocoagulation and use of toxic substances. There are also some IVHs of unknown cause.

For diagnostic investigation, in addition to the evaluation of blood pressure and bloodwork with coagulation study, brain computed tomography and magnetic resonance imaging are performed. Angiography can also be requested when considered relevant in the etiological investigation. This research is essential for diagnosis and therapeutic orientation.

As a consequence of IVH, intracranial hypertension or hydrocephalus may occur. This may be due to the disturbance of the CSF circulation or to the toxic effects of blood and its degradation products. Patients with hydrocephalus usually undergo external ventricular drainage (EVD), the main risks being infections (meningitis, ventriculitis, abscess) or iatrogenic lesions due to the introduction of the catheter.

Fibrinolysis through EVD is also a possibility of treatment. However, the risk of EVD placement in patients with coagulation disorders or untreated AVMs and aneurysms increase, so the use of fibrinolytics is contraindicated in these cases.

It is important to treat intracranial hypertension and/or hydrocephalus and correct etiological factors to prevent further bleeding.

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Citation: Vilarinho, A. Spontaneous intraventricular haemorrhage. International Journal of Clinical Neurosciences and Mental Health 2017; 4(Suppl. 2):L16

Published: 20 Jun 2017



Open Access Publication Available at <http://ijcnmh.arc-publishing.org>

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