Spontaneous resolution of obstructive hydrocephalus from blood in the cerebral aqueduct

Shadi Yaghi, Archana Hinduja
University of Arkansas for Medical Sciences, Little Rock, AR, USA

Abstract

Obstructive hydrocephalus is a neurological emergency that needs to be immediately identified and treated. It very rarely resolves without treatment. We report about an 86-year-old man with right frontal stroke who developed obstructive hydrocephalus caused by blood in the cerebral aqueduct. The patient had sudden and immediate clinical improvement and a repeated head computed tomography (CT) scan showing spontaneous resolution of the hematoma in the aqueduct and hydrocephalus (Figure 1).

Discussion

There are few reports of spontaneous resolution of acute hydrocephalus in children, but only one case was reported in an adult. Obstruction of cerebral aqueduct resulted in non-communicating hydrocephalus resulting in increased intracranial pressure. The elevated pressure in the lateral and third ventricles pushed the blood clot from the cerebral aqueduct downwards, resulting in spontaneous resolution of the hydrocephalus. This likely occurred because there was only a small amount of blood in the cerebral aqueduct and no blood in the fourth ventricle, which made it easy for the above pressure to relieve the obstruction. Our case demonstrates that spontaneous resolution may occur in acute obstructive hydrocephalus when it is caused by minimal blood in the cerebral aqueduct, with no blood in the fourth ventricle. However, this should not be a reason to delay treatment, which should be initiated immediately to prevent irreversible brain injury.

References