

Pseudo-intraventricular hemorrhage from a deep calcarine fissure

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Received: 20 March 2013 / Accepted: 19 October 2013 / Published online: 31 October 2013
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Abstract Evidence of areas of increased attenuation density within lateral ventricles at computed tomography (CT) of the brain is a finding of acute or subacute intraventricular hemorrhage. The purpose of this case report is to describe a 14-year-old female who presented with an episode of complicated migraine. Brain CT showed an area of high attenuation density (35 Hounsfield Units) in the trigone and occipital horn of the right lateral ventricle, mimicking a blood-fluid level from subacute intraventricular hemorrhage. Magnetic resonance imaging (MRI) of the brain showed that this resulted from gray matter lining a deep calcarine fissure. A deep calcarine fissure may mimic intraventricular hemorrhage at CT. Correct CT and MRI interpretation allows to avoid invasive diagnostic tests including lumbar puncture or intra-arterial catheter angiography.

Keywords Brain · Computed tomography · Gyru · Intraventricular hemorrhage · Magnetic resonance imaging · Sulcus · Ventricle

Introduction

The purpose of this case report is to present a case of pseudo-intraventricular hemorrhage, i.e., brain computed tomography (CT) scans consistent with blood-fluid level in

the trigone and occipital horn of a lateral ventricle, resulting from the gray matter lining an ipsilateral deep calcarine fissure [7] at magnetic resonance imaging (MRI).

Case report

A 14-year-old female tourist in our town went to a night party, had some alcohol drink, and had only a 4-h sleep. In the morning later, she complained acute headache, photophobia, tearing, horizontal diplopia from left sixth cranial nerve palsy, and was admitted to the Emergency Department of our institution. Neurological examination showed paresis of the left lateral rectus muscle. History revealed the occurrence of the same symptoms 2 months before, during a migraine episode. Brain CT (Fig. 1) showed only an area of increased attenuation density within the trigone and occipital horn of the right lateral ventricle. Mean attenuation density value of this area was 35 HU versus a mean value of 5.5 HU at the same level in the contralateral normal ventricle. This seemed consistent with blood-fluid level. Gadolinium-enhanced brain MRI (Fig. 2) was negative and disclosed that the CT finding resulted from the gray matter lining a deep calcarine fissure. Laboratory and toxicology were normal. When the patient's mother was contacted by phone call, she confirmed that her daughter suffered from migraine and that a brain MRI performed 1 year before reported the same finding. The girl was then discharged after complete regression of symptoms, with the diagnosis of complicated migraine.

Discussion

At unenhanced CT scans, mimics of intracranial hemorrhage include calcifications, melanin, high proteinaceous

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