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Unilateral spontaneous uncal herniation in a patient with chronic headache

Gokhan Tonkaz[1]

Zakir Sakci[2]

Hayri Ogul[1,3]

Mecit Kantarci[1]

Author details can be found at the end of this article

Correspondence to:
Hayri Ogul;
drhogul@gmail.com

A 32-year-old woman with no history of chronic disease was admitted to the authors' department with a headache that had got progressively worse over the last 5 years. There was no history of vomiting, nausea or weight loss. Physical examination was normal. Her body temperature and other vital signs were normal. Laboratory examinations were also normal, including complete blood cell count, serum electrolytes and liver function tests. On first presentation 5 years ago, cranial computed tomography was completely normal (Figure 1a). Three years after this, magnetic resonance imaging of the brain demonstrated minimal right uncal herniation (Figures 1b and c). At the latest presentation, magnetic resonance imaging demonstrated apparent spontaneous herniation of the uncus of the right parahippocampal gyrus (Figures 1d and e), but no other pathological findings such as a space-occupying lesion. The patient was treated medically and monitored.

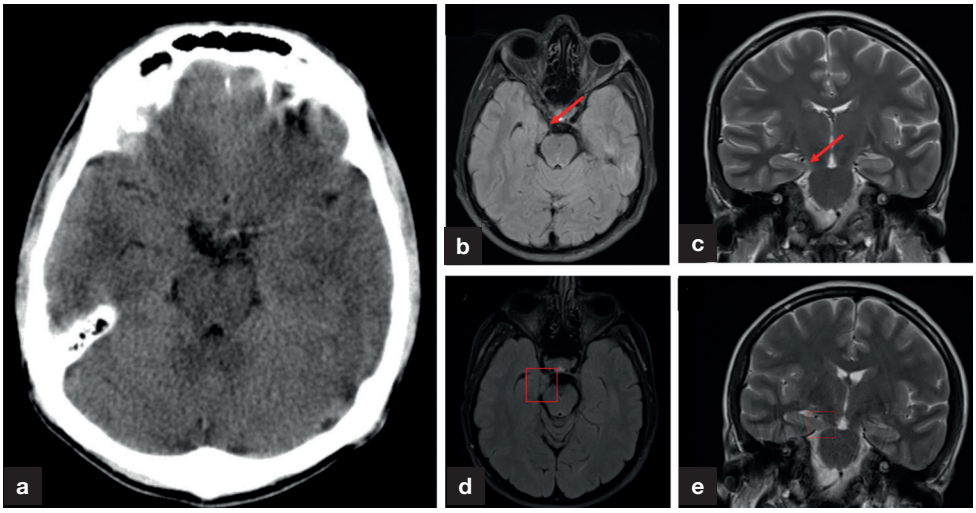

Figure 1. a. In 2015, at the initial presentation, there is no pathology visible on cranial computed tomography. In 2018 follow-up magnetic resonance imaging as (b) axial fluid-attenuated inversion recovery and (c) coronal T2-weighted magnetic resonance scans shows minimal herniation of the uncal gyrus across the right lateral margin of the tentorium (arrows). In 2020, at the latest presentation, (d) axial fluid-attenuated inversion recovery sequence clearly demonstrates uncal herniation consisting of dislocation of the anterior part of the right parahippocampal gyrus (frame); moreover, compression of ipsilateral cerebral peduncle is seen. e. Coronal T2-weighted magnetic resonance scan shows herniation of the uncal gyrus across the right lateral margin of the tentorium (dashed frame) without mass effect.

Uncal herniation is a subtype of transtentorial brain herniation which occurs secondary to mass effect that leads to increased intracranial pressure. Mass effects are most often caused by haemorrhages or neoplasms (Cadena et al, 2017), but this patient had none of these.

Author details

[1]Department of Radiology, Medical Faculty, Ataturk University, Erzurum, Turkey

[2]Department of Radiology, Umraniye Training and Research Hospital, Istanbul, Turkey

[3]Anesthesiology, Clinical Research Office, Ataturk University, Erzurum, Turkey

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Reference

Cadena R, Shoykhet M, Ratcliff JJ. Emergency neurological life support: intracranial hypertension and herniation. Neurocrit Care. 2017;27(S1):82–88. https://doi.org/10.1007/s12028-017-0454-z