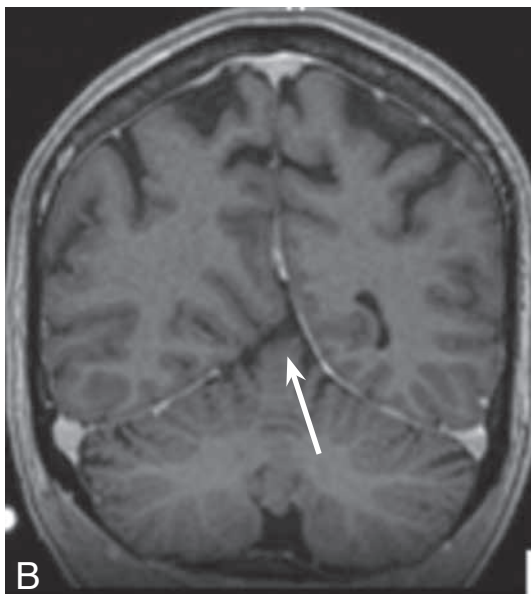


IMAGES IN CLINICAL RADIOLOGY



Tentorium hypoplasia with partial occipital lobe herniation

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A 50-year-old woman was referred by her general practitioner to our hospital with complaints of vertigo and headaches. Magnetic resonance (MR)-imaging, axial (Fig. A) and coronal (Fig. B) T1 weighted, revealed a partial right occipital lobe herniation (inferior precuneus), secondary to a congenital focal hypoplasia of the tentorium, located on the anterosuperior part of the cerebellum, a rare incidental finding.

Comment

The tentorium cerebelli is the second largest dural reflection. It extends horizontally between the cerebellum and the cerebral hemispheres and thereby divides the cranial cavity into supratentorial and infratentorial. Agenesis or hypoplasia of the tentorium cerebelli is usually associated with extensive central nervous system malformations, such as Dandy-Walker Syndrome and Arnold-Chiari Malformation.

Isolated hypoplasia has only been described in four cases before in adults. In the first case described by Tanohata a computed tomography (CT) showed a focal hypoplasia of the left tentorium cerebelli with secondary protrusion of the temporal lobe into the superior cerebellar and quadrigeminal cisterns. The symptoms of the patient (galactorrhea) were not related to the imaging findings.

The other three cases are described by Abi-Jaoudeh and Chevrette. In the first case CT and MRI investigations showed a hypoplasia of the right tentorial leaf with protrusion of the isthmus of cingulate gyrus and the medial occipitotemporal gyrus into the superior cerebellar cistern. In the second case a CT showed a small hypoplasia of the right tentorial leaf with discrete protrusion of the medial occipitotemporal gyrus and the parahippocampal gyrus into the cerebellar cistern. In the third case an angio-MRI for cerebral aneurysm screening, showed a hypoplasia of the right tentorial leaf with protrusion of the parahippocampal gyrus into the quadrigeminal cistern. In all three cases the symptoms were unrelated to these imaging findings.

The most accepted hypothesis about the development of the tentorium is an abnormal fusion of the tentorium by Tanohata. The tentorium develops as the second dural reflection, first the medial parts develop and secondly the lateral parts. Afterwards the medial parts involute and the lateral parts, which consists of the caudolateral and the rostrolateral parts, fuse. Abnormal fusion of the lateral parts can possibly lead to this anomaly. Birth traumas or perinatal insults can also be considered as the cause of this

anomaly. Most probably symptoms depend on the severity and location of the tentorial defect, but the exact clinical significance is still uncertain.

It is important to recognise a tentorial hypoplasia and to know and report that there are no known clinical symptoms associated with this finding. In this case no treatment was needed, because the symptoms were unrelated to the imaging findings.

Reference

1. Abi-Jaoudeh N., Chevrette E.: Isolated hypoplasia of the tentorium. *J Comput Assist Tomogr*, 2006, 30: 131-134.

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