

Atrial diverticula

Massive ventricular dilatation causes stretching and dehiscence of the **fornix** with formation of unilateral or bilateral pial pulsion diverticula of the inferior medial wall of the **atrium**. Enlargement of the pial pouch creates a dramatic sub**arachnoid cyst** that may herniate downward through the incisura into the lateral mesencephalic, precentral cerebellar, and **superior vermian cisterns** where it displaces the brain stem, vermis, and fourth ventricle. Lateral ventricular diverticula may be identified and distinguished from the dilated fourth ventricle and dilated suprapineal recess, with which they are so commonly confused, when all of the following signs are apparent on computed tomography (CT): (1) marked unilateral or bilateral atrial dilatation; (2) focal dehiscence of the medial atrial wall; (3) ipsilateral shortening of the tentorial band in axial section; (4) focal defect in the tentorial band in coronal section; (5) draping of the medial atrial wall over the free margin of tentorium, with continuity of cerebrospinal fluid density around the edge of tentorium in axial and/or coronal sections; (6) bowing of the crus (or crura) of fornix; (7) separation of fornix from **splenium**, with visualization of the hernia ostium; (8) asymmetrical position of the choroid plexi, which attach to and define the lateral borders of the fornices; (9) contralateral displacement of the **internal cerebral veins**; and (10) septa separating diverticulum from **third ventricle** ¹⁾.

Obstructive hydrocephalus in a newborn due to cerebral atrium diverticulum formation: complete resolution after subdural hematoma evacuation ²⁾.

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Naidich TP, McLone DG, Hahn YS, Hanaway J. Atrial diverticula in severe hydrocephalus. AJNR Am J Neuroradiol. 1982 May-Jun;3(3):257-66. PubMed PMID: 6805275.

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Maduri R, Aureli V, Viaroli E, Rizzi M, Giammattei L, Daniel RT, Messerer M. Obstructive hydrocephalus in a newborn due to cerebral atrium diverticulum formation: complete resolution after subdural hematoma evacuation. World Neurosurg. 2018 May 8. pii: S1878-8750(18)30929-X. doi: 10.1016/j.wneu.2018.04.209. [Epub ahead of print] PubMed PMID: 29751185.

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