Teaching NeuroImages: Congenital variant misdiagnosed as cerebral venous sinus thrombosis

Clinical pitfall

Sara Dawit, MD, Devika M. Das, Marie D. Acierno, MD, and Cumara B. O'Carroll, MPH, MD

Neurology® 2019;92:e2064-e2065. doi:10.1212/WNL.0000000000007372

Correspondence

Dr. O'Carroll

Ocarroll.Cumara@mayo.edu

Figure Various imaging modalities

(A, B) Magnetic resonance venography demonstrates a hypoplastic medial right transverse sinus and is likely a congenital variant. Lateral to the vein of Labbe the right transverse sinus and sigmoid sinus are small, but patent. Dominant left transverse sinus, superior sagittal sinus, internal cerebral veins, and straight sinus are all unremarkable in appearance. (C) Right fundus photograph demonstrates grade 2 papilledema using Frisen grading scale. (D) Left fundus photograph demonstrates grade 2 papilledema.

A 23-year-old woman, with a history of cerebral venous sinus thrombosis (CVST) on warfarin, presented with acute septic hemarthrosis, requiring surgery. A cerebrovascular consultation was placed for anticoagulation recommendations. Brain magnetic resonance venography revealed a hypoplastic right transverse sinus (figure). Anticoagulation was discontinued. Given her history of headache and papilledema, acetazolamide was started due to clinical suspicion of idiopathic intracranial hypertension (IIH).

Unilateral hypoplasia/aplasia of the transverse sinus is a normal variant observed in 20%–39% of healthy people and can mimic CVST.¹ Transverse sinus stenosis in IIH can also mimic CVST.² Misdiagnosing these entities as CVST can lead to significant complications.

Author contributions

Study concept and design: Dr. Dawit, D.M. Das, Dr. Acierno, Dr. O'Carroll. Acquisition, analysis, or interpretation of images: Dr. Dawit, Dr. Acierno, Dr. O'Carroll. Drafting of the manuscript: Dr. Dawit, D.M. Das, Dr. Acierno, Dr. O'Carroll. Study supervision: Dr. Acierno,

MORE ONLINE

→Teaching slides

links.lww.com/WNL/A862

From the Department of Neurology (S.D., C.B.O.), Division of Neuro-Ophthalmology, Department of Ophthalmology (M.D.A.), and Mayo Clinic School of Medicine (D.M.D.), Mayo Clinic, Scottsdale, AZ.

Go to Neurology.org/N for full disclosures. Funding information and disclosures deemed relevant by the authors, if any, are provided at the end of the article.

Dr. O'Carroll. Critical revision of the manuscript: Dr. Dawit, D.M. Das, Dr. Acierno, Dr. O'Carroll.

Study funding

No targeted funding reported.

Disclosure

The authors report no disclosures relevant to the manuscript.
Go to Neurology.org/N for full disclosures.

References

1. Han K, Chao AC, Chang FC, et al. Diagnosis of transverse sinus hypoplasia in magnetic resonance venography: new insights based on magnetic resonance imaging in combined dataset of venous outflow impairment case-control studies: post hoc case-control study. *Medicine* 2016;95:e2862.
2. Aldossary NM. Value of double-track sign in differentiating primary from thrombosed transverse sinus stenosis in patients presumed to have idiopathic intracranial hypertension. *eNeurologicalSci* 2018;10:22-25.

Neurology®

Teaching NeuroImages: Congenital variant misdiagnosed as cerebral venous sinus thrombosis: Clinical pitfall

Sara Dawit, Devika M. Das, Marie D. Acierno, et al.

Neurology 2019;92:e2064-e2065

DOI 10.1212/WNL.0000000000007372

This information is current as of April 22, 2019

Updated Information & Services	including high resolution figures, can be found at: http://n.neurology.org/content/92/17/e2064.full
References	This article cites 2 articles, 0 of which you can access for free at: http://n.neurology.org/content/92/17/e2064.full#ref-list-1
Subspecialty Collections	This article, along with others on similar topics, appears in the following collection(s): All Cerebrovascular disease/Stroke http://n.neurology.org/cgi/collection/all_cerebrovascular_disease_stroke All Clinical Neurology http://n.neurology.org/cgi/collection/all_clinical_neurology All Neuro-ophthalmology http://n.neurology.org/cgi/collection/all_neuroophthalmology Idiopathic intracranial hypertension http://n.neurology.org/cgi/collection/idiopathic_intracranial_hypertension MRI http://n.neurology.org/cgi/collection/mri
Permissions & Licensing	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: http://www.neurology.org/about/about_the_journal#permissions
Reprints	Information about ordering reprints can be found online: http://n.neurology.org/subscribers/advertise

Neurology® is the official journal of the American Academy of Neurology. Published continuously since 1951, it is now a weekly with 48 issues per year. Copyright © 2019 American Academy of Neurology. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.