

UC Irvine

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health

Title

Hyperdense Cerebral Sinus Vein Thrombosis on Computed Tomography

Permalink

<https://escholarship.org/uc/item/4d64w2cc>

Journal

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 11(2)

ISSN

1936-900X

Authors

Zeina, Abdel-Rauf
Kassem, Eias
Klein, Adi
[et al.](#)

Publication Date

2010

Copyright Information

Copyright 2010 by the author(s). This work is made available under the terms of a Creative Commons Attribution-NonCommercial License, available at <https://creativecommons.org/licenses/by-nc/4.0/>

Peer reviewed

Hyperdense Cerebral Sinus Vein Thrombosis on Computed Tomography

Abdel-Rauf Zeina*
Eiass Kassem†
Adi Klein†
Alicia Nachtigal*

* Department of Radiology, Hillel Yaffe Medical Center, Hadera, Israel. Affiliated to Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel
† Pediatric Department, Hillel Yaffe Medical Center, Hadera, Israel. Affiliated to Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel.

Supervising Section Editor: Sean Henderson, MD

Submission history: Submitted January 9, 2010; Revision January 11, 2010; Accepted January 19, 2010

Reprints available through open access at http://escholarship.org/uc/uciem_westjem

[West J Emerg Med 2011; 11(2):217].

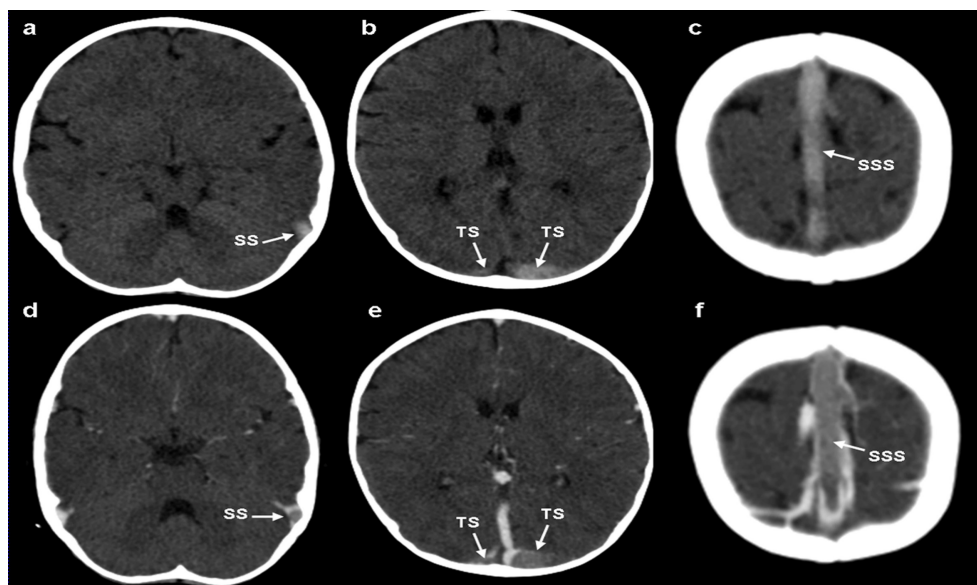


Figure 1. Unenhanced axial computed tomography (CT) (a-c) shows the hyperdense appearance of the left sigmoid sinus (SS), left and right transverse sinus (TS), and the superior sagittal sinus (SSS), representing acute thrombus (“cord sign”). Enhanced axial CT images (d-f) obtained at the same levels showing the filling defects within the cerebral veins corresponding to sinus vein thrombosis.

A two-year-old girl presented with poor appetite, vomiting and decreased level of consciousness. Brain unenhanced computed tomography (CT) on admission demonstrated no hemorrhages but a hyperdense appearance of the left sigmoid sinus, left and right transverse sinus, and the superior sagittal sinus, consistent with the “cord sign” and representing acute thrombus (Figure 1a-c). Brain CT venography (obtained after administration of contrast agent) showed filling defects within the same cerebral veins corresponding to extensive sinus vein thrombosis (SVT) (Figure 1d-f).

On unenhanced CT scan, thrombus appears hyperdense for the first 7-14 days.¹ Its prevalence is variable and generally accepted to be an accurate sign when present.² It is very important to diagnose this condition as early as possible

so that specific treatment can be started. The cord sign (hyperdense thrombosed veins on unenhanced CT) and the empty-delta sign (a filling defect in the superior sagittal sinus on enhanced CT) are considered pathognomonic for SVT.

Address for Correspondence: Abdel-Rauf Zeina, MD, Department of Radiology, Hillel Yaffe Medical Center, P.O.B. 169, Hadera 38100, Israel

REFERENCES

1. Haage P, Krings T, Schmitz-Rode T. Non traumatic vascular emergencies: imaging and intervention in acute venous occlusion. *Eur Radiol.* 2002;12:2627-43.
2. Kriss VM. Hyperdense posterior falx in the neonate. *Paediatr Radiol.* 1998;28:817-9.