

Case Report:

Developmental Venous Anomaly

Masahiro Ida, M.D.

Department of Radiology, Tokyo Metropolitan Ebara Hospital, Tokyo, Japan

Patient history

39-year-old female patient with developmental venous anomaly.

Image findings

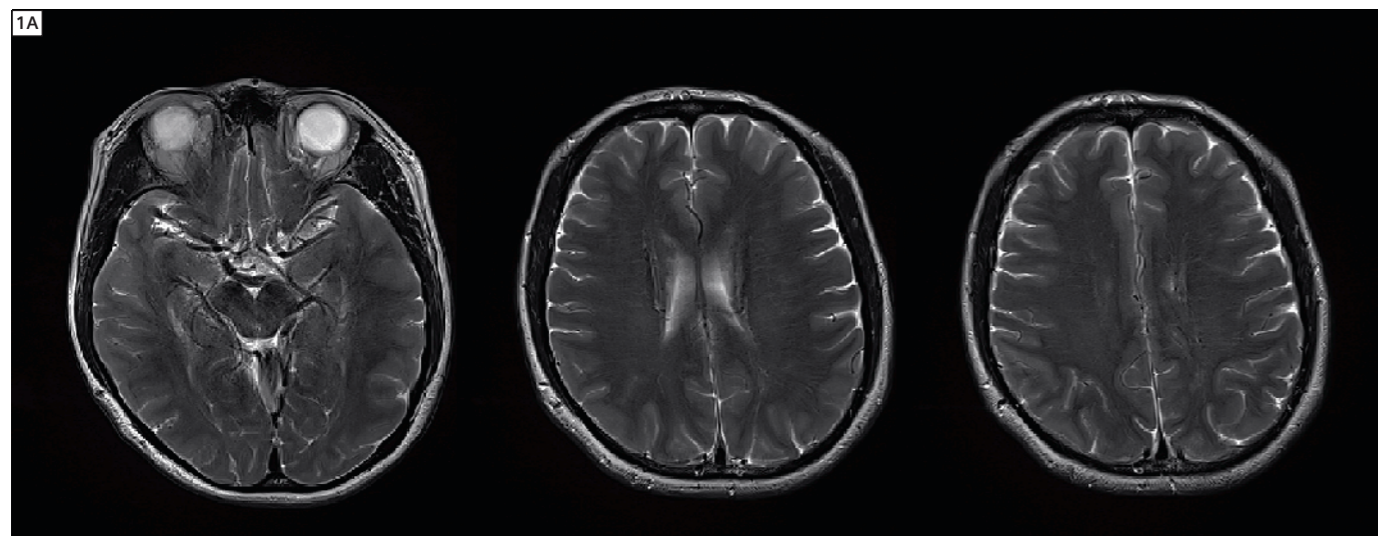
Axial T2-weighted Turbo Spin Echo (TSE) image reveals slightly enlarged subependymal veins along the ventricular lining and linear hyperintensities along the medullary vessels perpendicular to a long axis of the lateral ventricles. Susceptibility-weighted image (*syngo* SWI) acquired with a 32-channel head coil at 3T (MAGNETOM Trio, A Tim System) reveals diffusely prominent deep

medullary and collector veins draining into the subependymal veins. These veins can be well delineated from the surrounding brain tissue by their signal loss on *syngo* SWI; this is a clear advantage to conventional T2-weighted TSE imaging (Figs. 1A–1C).

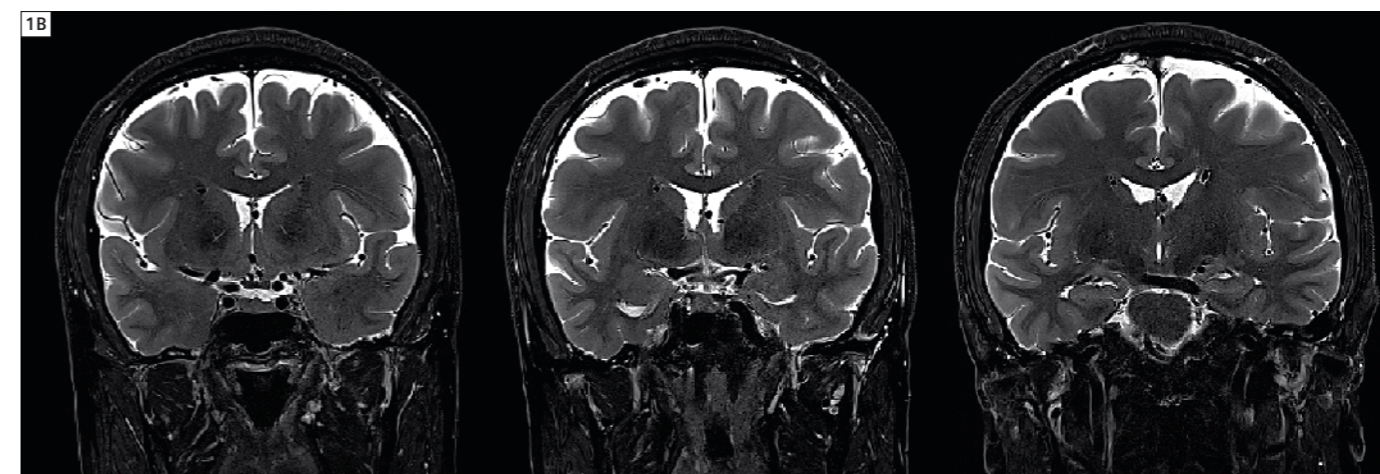
The *syngo* SWI findings are also concordant to the postcontrast 3D T1-weighted images, also demonstrating strongly enhancing umbrella-like medullary and collector veins. These findings are consistent with developmental venous anomaly (DVA).

Contact

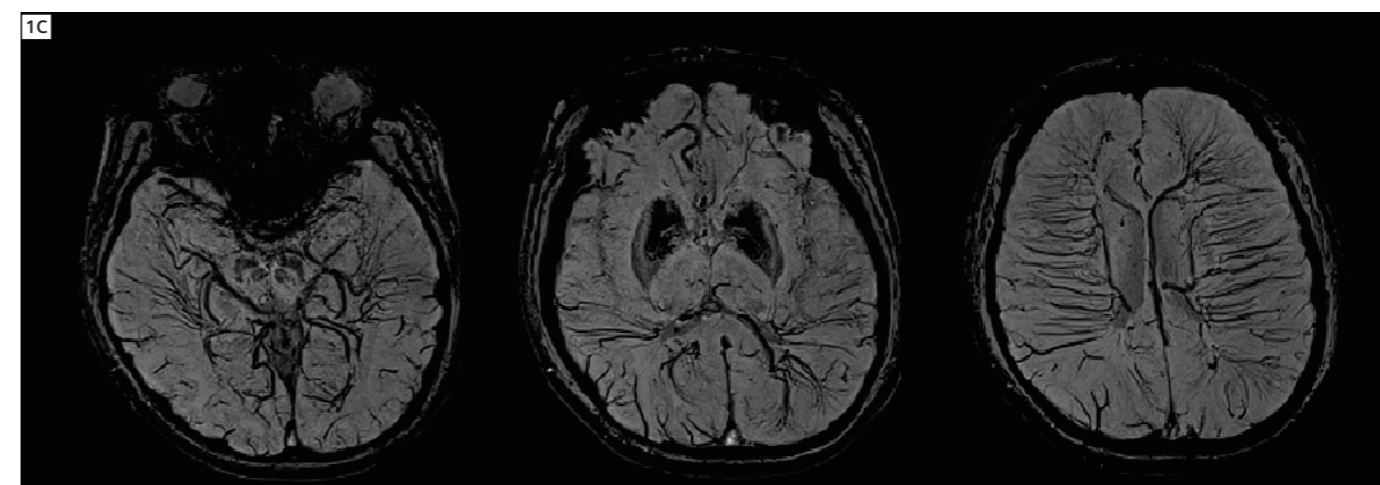
Masahiro Ida, M.D.
Department of Radiology
Tokyo Metropolitan Ebara Hospital
4–5–10 Higashi-Yukigaya, Ota-ku,
Tokyo 145–0065
Japan
rxb00500@gmail.com



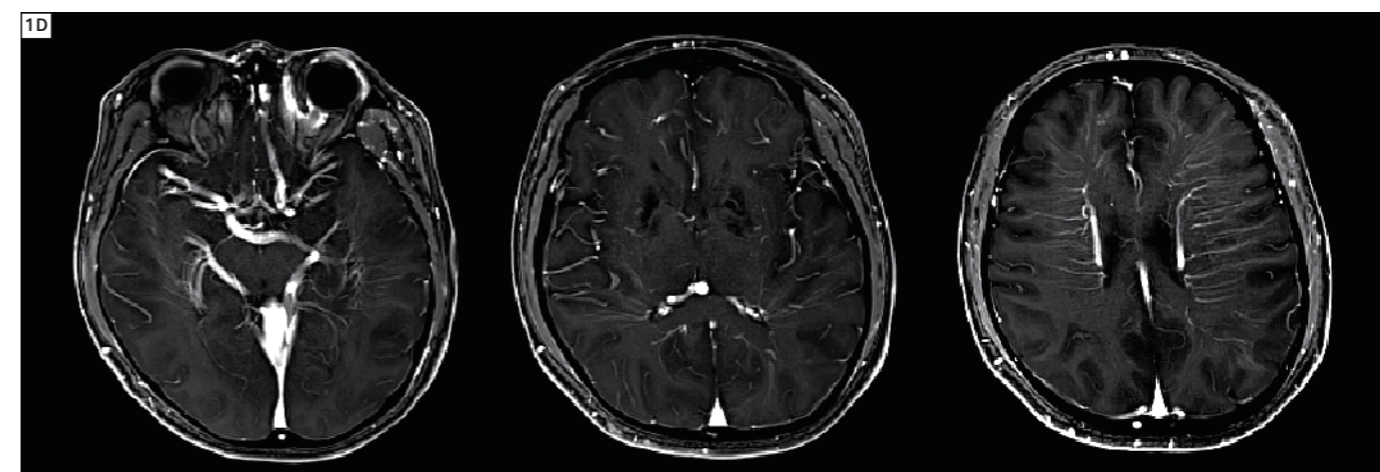
1A Transversal T2-weighted TSE images acquired with the 32-channel head coil at 3T. Slice thickness 5 mm, TR 4500 ms, TE 98 ms, BW 180 Hz/px, PAT factor 2, turbo factor 11, FOV 199 x 220 mm, matrix 371 x 512, total acquisition time: 2:32 min.



1B Corresponding fat-suppressed (SPAIR) coronal T2-weighted TSE images. Slice thickness 2 mm, TR 4000, TE 72 ms, BW 205 Hz/px, PAT factor 3, turbo factor 9, FOV 200 x 200 mm, matrix 410 x 512, 2 averages, acquisition time: 6:32 min.



1C Transversal thin MinIP (slice thickness 9.6 mm) susceptibility-weighted image (*syngo* SWI). Original slice thickness 1.2 mm, TR 28 ms, TE 20 ms, BW 120 Hz/px, PAT factor 3, turbo factor 10, FOV 230 x 230 mm, matrix 320 x 320, acquisition time: 6:01 min.



1D Axial thin MPR (slice thickness 5 mm) of contrast-enhanced 3D T1-weighted FLASH imaging. Original slice thickness 1 mm, TR 12 ms, TE 6.2 ms, BW 340 Hz/px, PAT factor 4, FOV 220 x 220 mm, matrix 320 x 320, acquisition time: 2:54 min.