

Case 2: Biswanger's disease

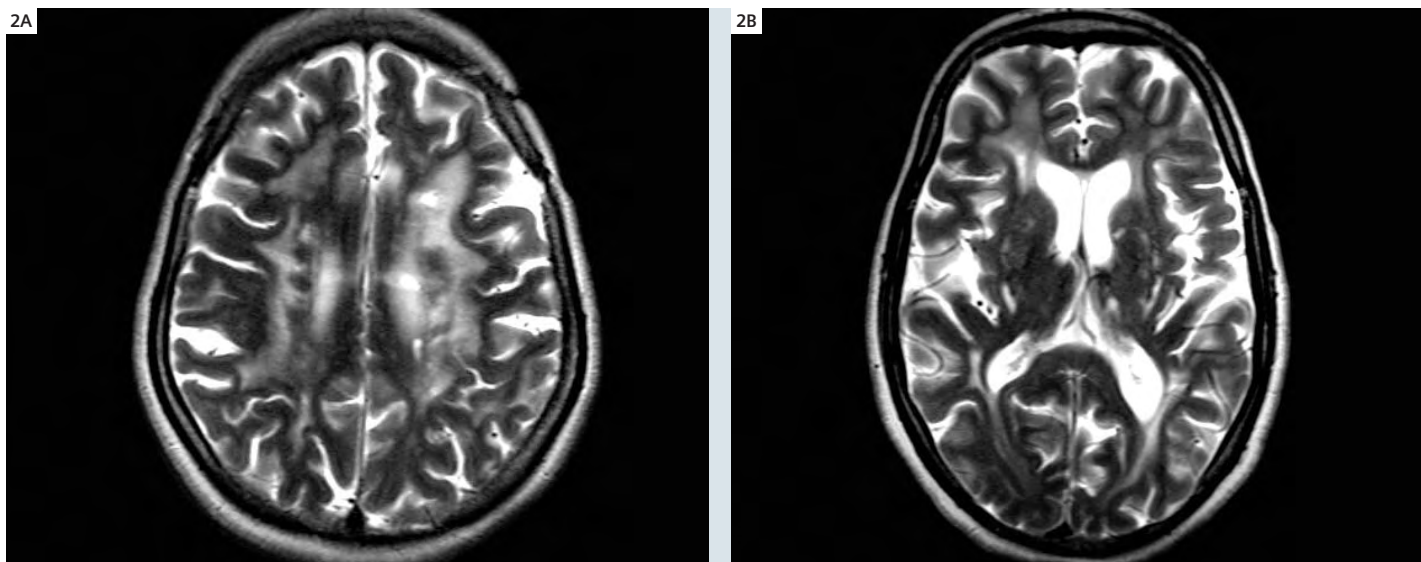
Biswanger's disease is a subcortical demyelinating syndrome resulting from multiple infarcts affecting the white substance and consecutive to a history of arterial hypertension or cerebrovascular accidents. It is accompanied by neurological signs and motor problems.

Clinical profile: Young hypertensive patient with known history of right hemiparesis four years ago presents now with residual weakness.

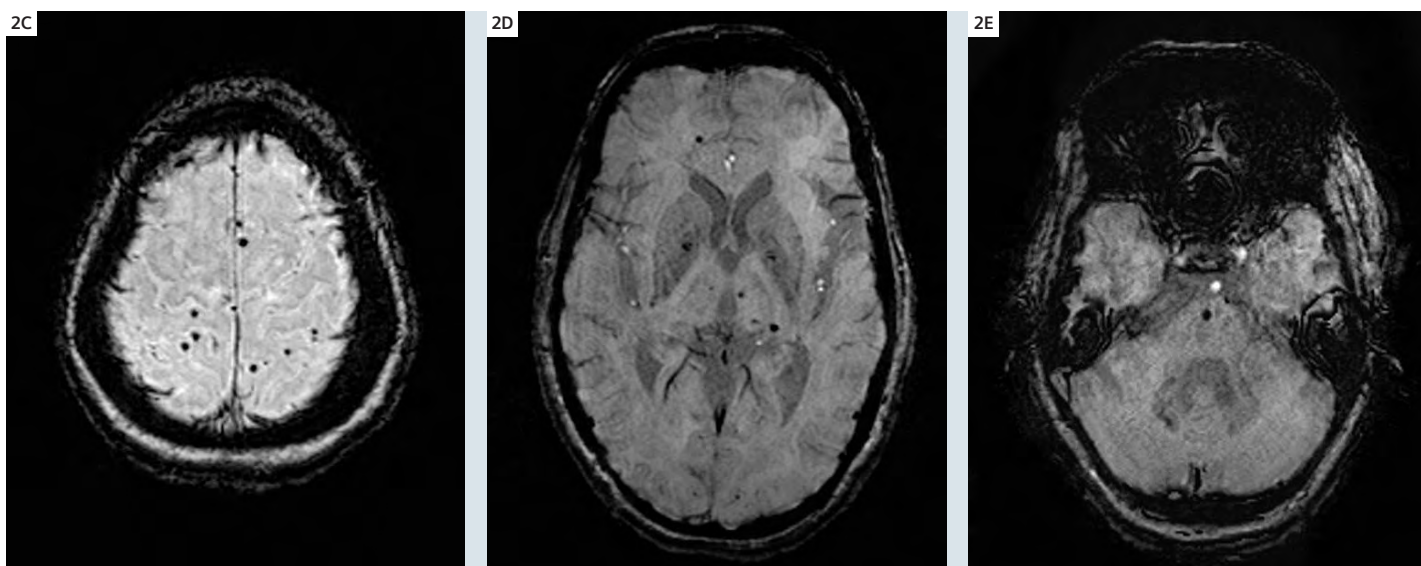
syngo SWI axial images reveal multiple petichial hemosiderin deposits in bilateral fronto-temporo-parietal cortical grey mat-

ter, subcortical and deep white matter, basal ganglia, thalami, cruscerebri, pons and cerebellar white matter.

These findings are suggestive of Biswanger's disease. Multiple lacunar infarcts with extensive patchial hemorrhages are seen.



2A, B T2-weighted images.



2C-E *syngo* SWI images showing Biswanger's disease.

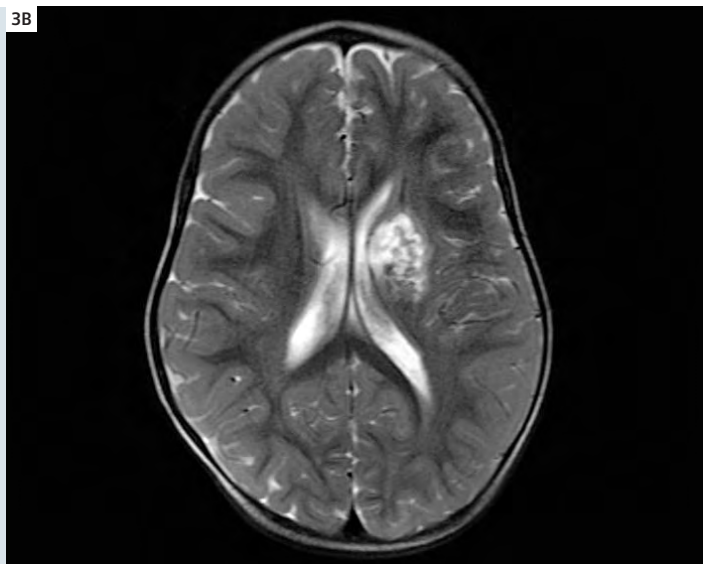
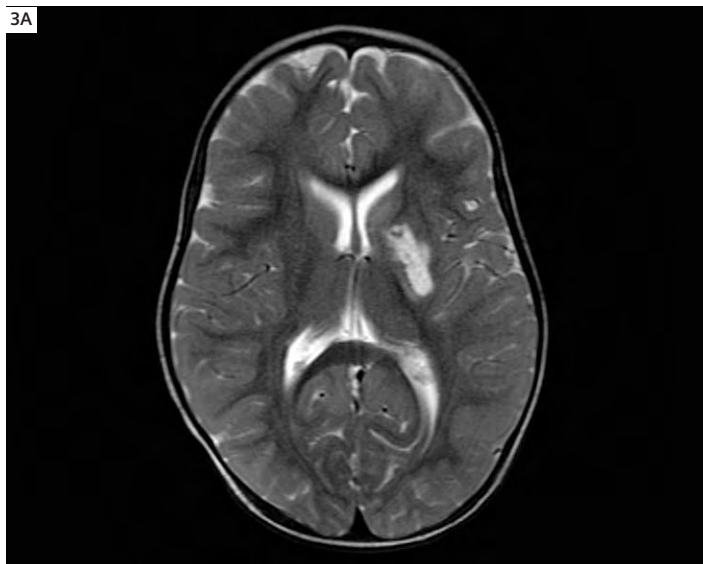
Case 3: Trauma

1.5-year-old girl* experienced a fall 10 days back. After 2 days she presented with complaints of upper limb and lower limb weakness. Past history significant for stay in NICU for 15 days for suspected meningitis. O/E tone normal to decreased on right UL and LL. Power > three on R limbs. No

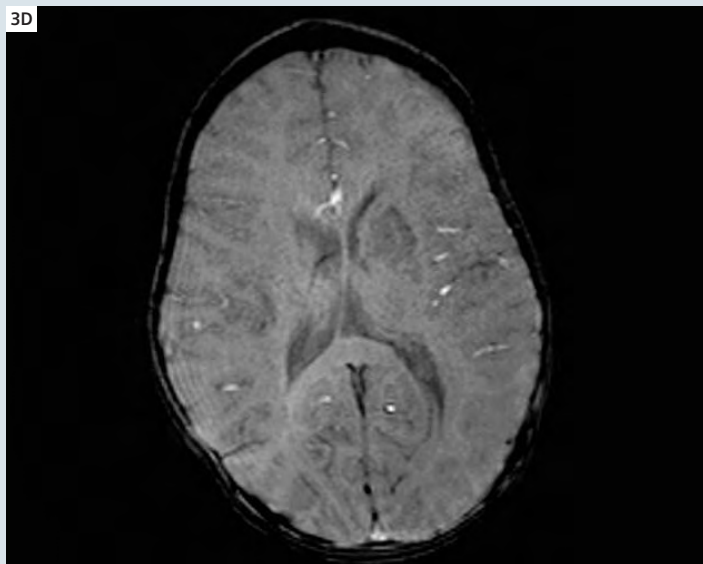
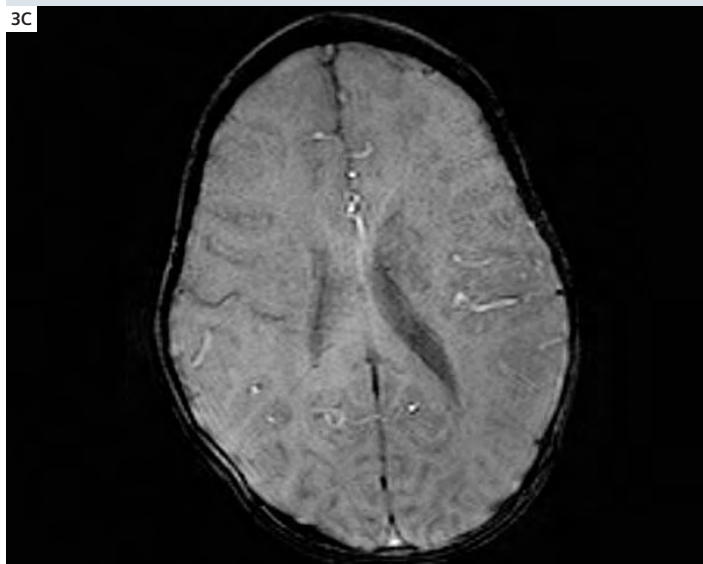
signs of meningeal irritation at present. Left putamen and caudate nucleus lesion (hypo to hyperintense – heterogenous) on T2-weighted images probably represents contusion with evidence of small hemorrhage rather than a large infarct because a very minimal hypointensity

is seen within this lesion on the SWI images. Left capsular and crus cerebri lesions are probably secondary to axonal injury.

*The safety of imaging children under the age of two has not been established.



3A,B T2-weighted images showing trauma lesions.

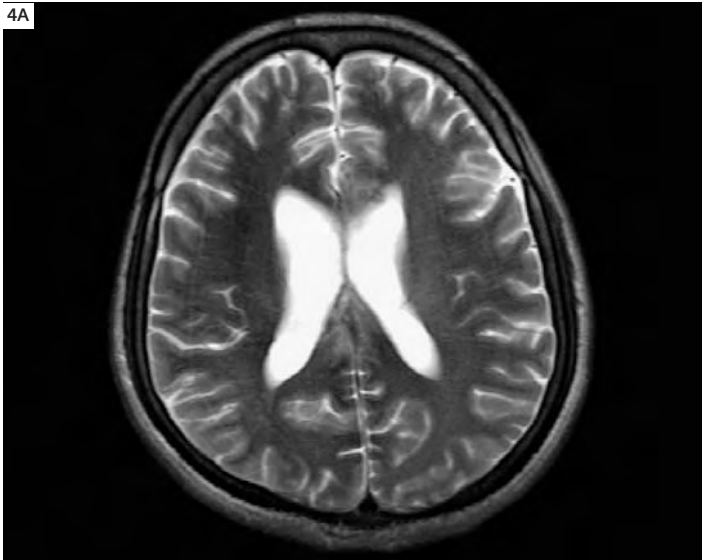


3C,D syngo SWI images showing hemorrhage.

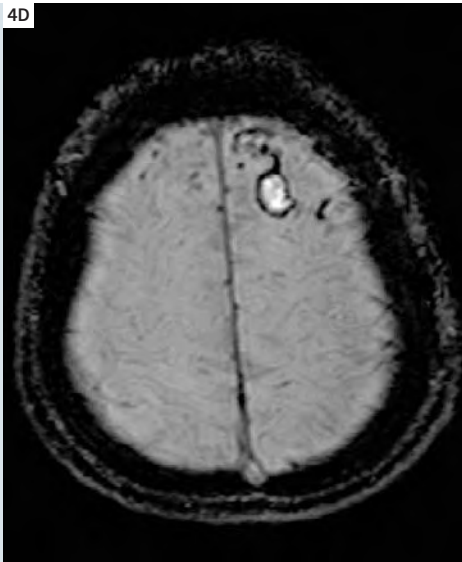
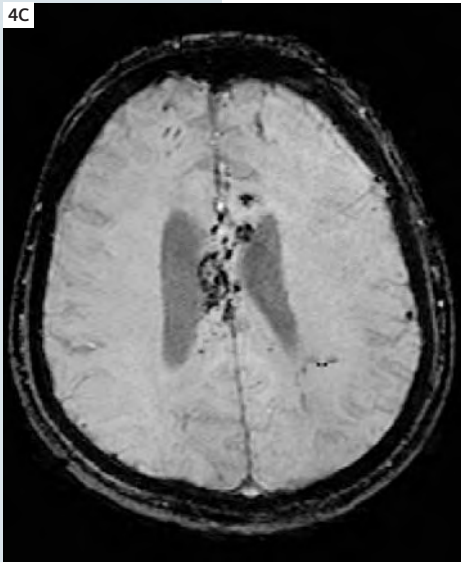
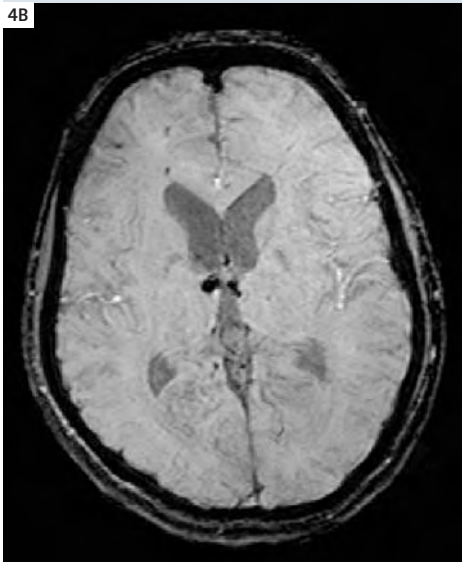
Case 4: Diffuse axonal injury

Multifocal petechial hemorrhages in bifrontal cortical and subcortical region, corpus callosum, callosamarginal fibres, bilateral ventral thalami and temporo –

parietal periventricular white matter on SWI images represent hemorrhage secondary to diffuse axonal injury with shear-stress strain.



4A T2-weighted image.



4B-D syngo SWI of Diffuse Axonal Injury.

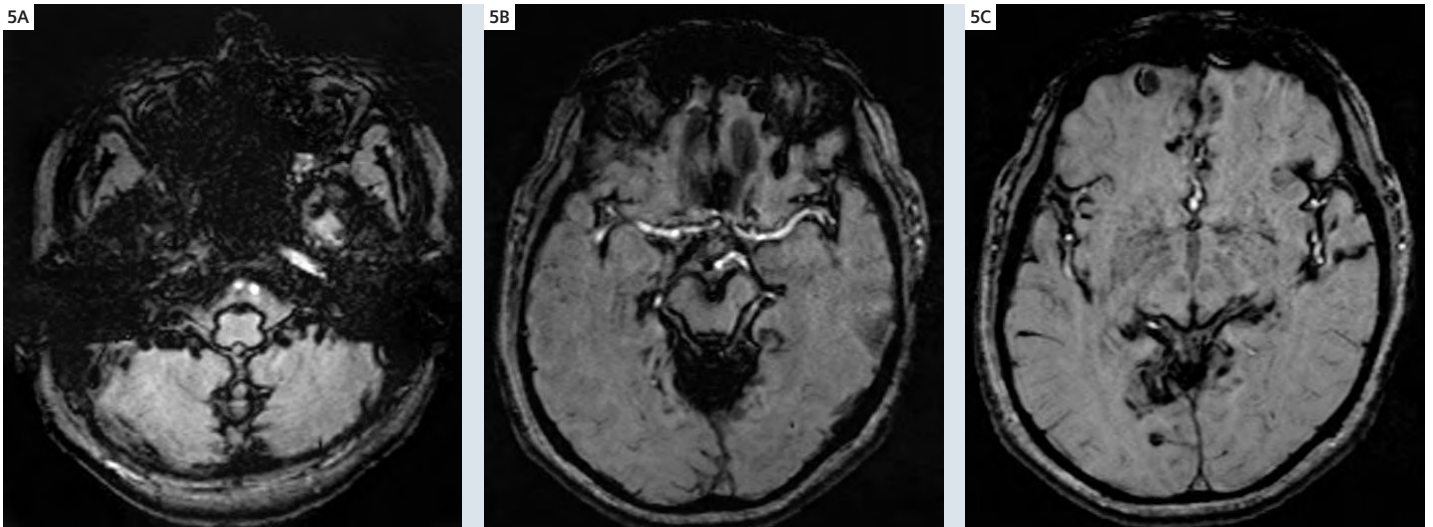
Case 5: Superficial Siderosis

Superficial Siderosis (SS) of the central nervous system is an uncommon disease characterized by accumulation of hemosiderin in the meninges, brain surface, spinal cord and cranial nerves. The deposition of hemosiderin, which may be cytotoxic to underlying tissue, results from chronic bleeding into the subarachnoid space. In many cases, the precise source of bleeding is not identified. The

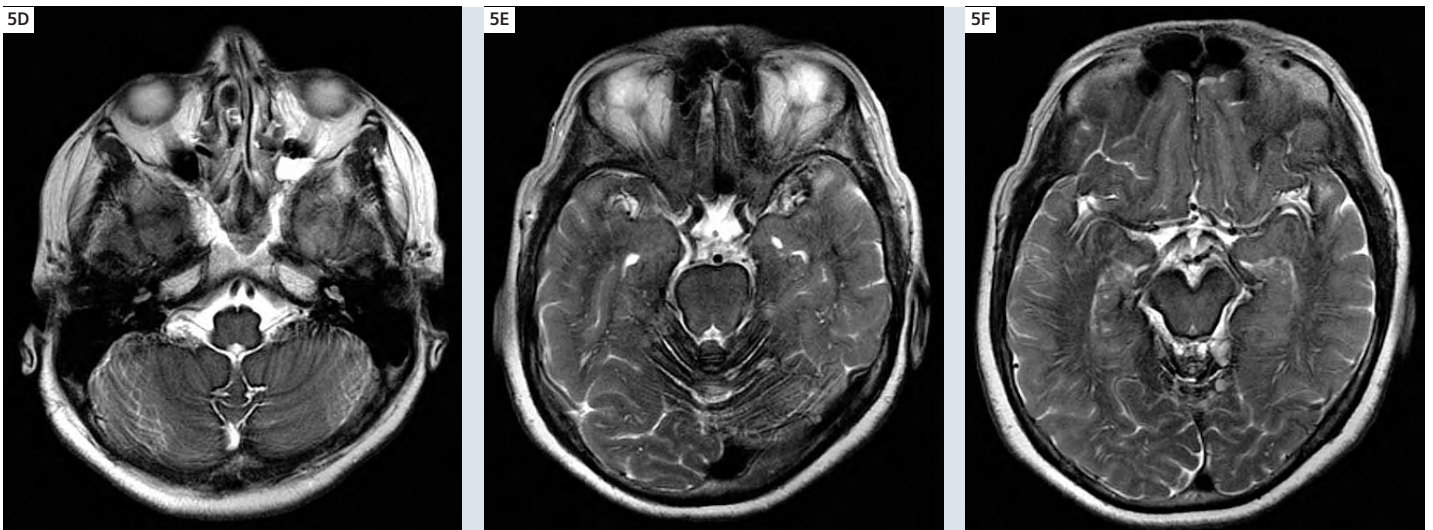
most common clinical presentation is one of progressive sensorineural hearing loss and ataxia, as was seen in this patient. Superficial siderosis should be considered in the differential diagnosis of progressive sensorineural hearing loss and/or ataxia because (1) it is easily diagnosed by MRI, which has high sensitivity for detecting heme products, (2) it is a potentially treatable condition, if a cause of bleeding can

be identified, and (3) diagnosis of SS may avoid unnecessary searches for other causes of hearing loss and ataxia.

Clinical profile: 60-year-old female complains of Tinnitus and deafness (R > L). Known complaints of hypertension for 8 years. Diffuse hypointensity along the surface of brainstem, prepontine cistern, ambient cistern, CP angle cistern, bilateral



5A-C syngo SWI Showing Superficial Siderosis.



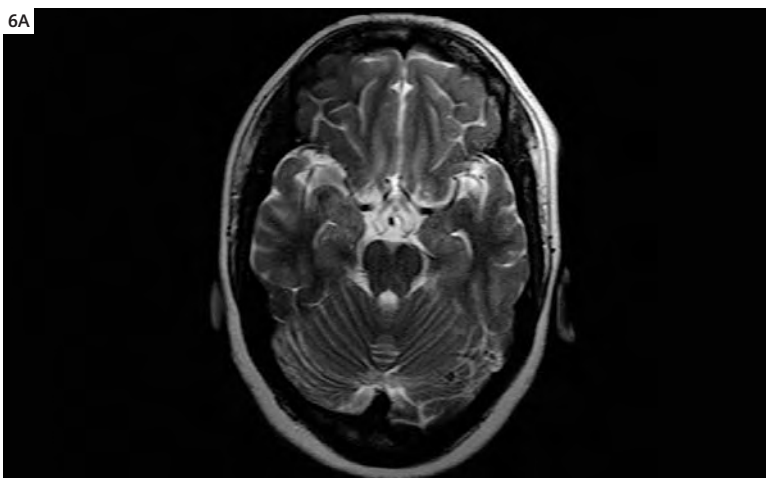
5D-F T2-weighted images of Superficial Siderosis.

cerebellar folia, bilateral sylvian cisterns, bilateral parietal and temporal cortical cerebral sulci on SWI images represent hemosiderin, consistent with Superficial Siderosis. Extension of these lesions along the course of bilateral 7th and 8th cranial nerves may result in decreased hearing and the lesions are more marked on the right side. These lesions appear minimally hypointense on T2-weighted images.

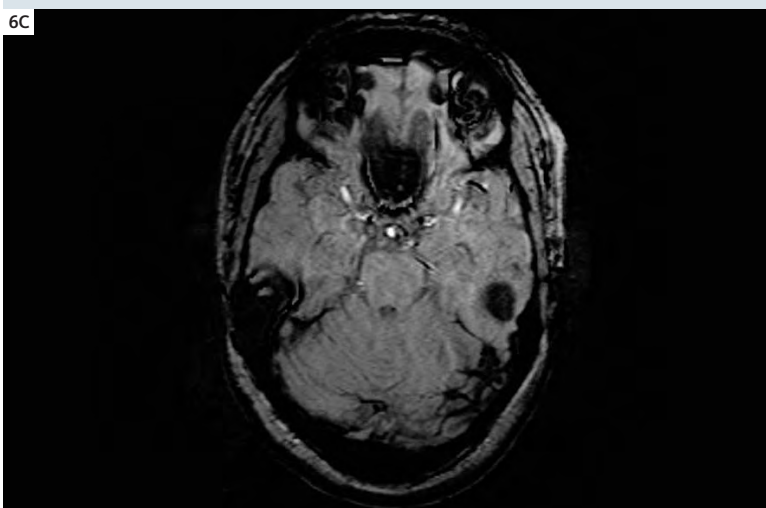
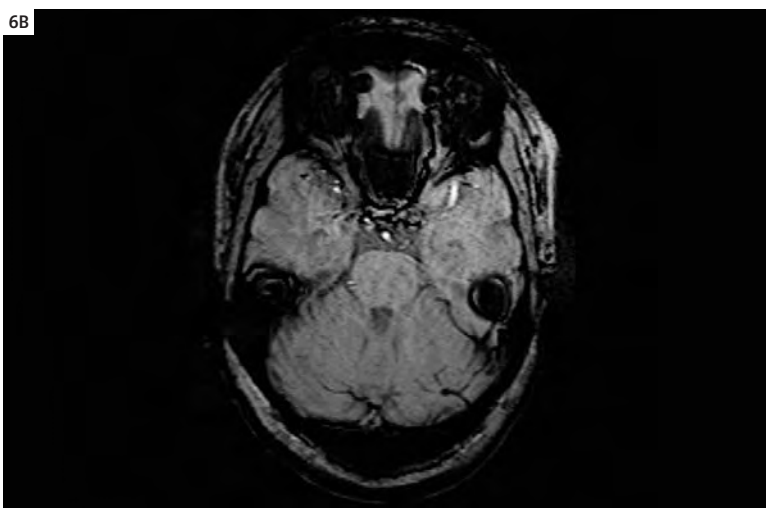
Case 6: Venous angioma

The patient presented with a history of slurring of speech two days ago. No history of motor or sensory weakness.

A focal T2 hypointense nodular lesion in the left cerebellar hemisphere with multiple radiating flow voids adjacent to the lesion, most probably suggestive of venous angioma. There is marked hypointensity in this lesion and adjacent flow void on the *syngo* SWI sequence.



6A T2-weighted image.



6B,C *syngo* SWI showing venous angioma.