Teaching NeuroImages: Superficial siderosis

Max R. Lowden, MD
Gary A. Thomas, MD

Address correspondence and
reprint requests to Dr. Max R.
Lowden, Department of
Neurology-EC037, Penn State
College of Medicine Milton S.
Hershey Medical Center, P.O.
Box 859, 30 Hope Drive,
Hershey, PA 17033
Mlowden@hmc.psu.edu

Figure 1 Axial MRI gradient-echo T2-weighted images showing hemosiderin deposition around the midbrain and cerebellar folia

A 47-year-old man had progressive lower extremity weakness and incoordination for 2 years. Examination showed bilateral proximal lower

extremity weakness, cerebellar ataxia, and brisk reflexes throughout. Cranial nerve examination showed hearing impairment. MRI showed hemosiderin deposition around the brainstem, cerebellum, and upper cervical cord (figures 1 and 2). CSF analyses showed protein of 108 mg/dL and red blood cells of 58 mm³.

Superficial siderosis most commonly presents with gait ataxia and hearing loss. It is caused by repeated slow hemorrhage into the subarachnoid space with CNS hemosiderin deposition in the subpial layers.¹ Imaging of the entire neuroaxis is indicated to localize a potential bleeding source, and may include cerebral and spinal angiography.²

Figure 2 Axial MRI gradient-echo T2-weighted image showing a rim of hypodensity around the upper cervical cord (A) and medulla (B)

The circumferential T2 hypointensity is due to hemosiderin deposition.

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From the Department of Neurology, The Pennsylvania State University Milton S. Hershey Medical Center College of Medicine, Hershey, PA.

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Max R. Lowden and Gary A. Thomas

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