

Diffusion Weighted MRI Findings in Heparin Induced Thrombocytopenia (HIT)

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Diffusion weighted MRI demonstrates acute restriction in the right anterior cerebral artery/middle cerebral artery borderzone, right MCA, right middle cerebral artery/posterior cerebral artery borderzone in Figure 1 and bilateral occipital lobe restrictions in Figure 2.

Case Summary

We report a 35 years-old woman presented to Shands Hospital at the University of Florida with ischemic strokes related to heparin-induced thrombocytopenia. She had a history of anti-phospholipid syndrome and was scheduled for surgical procedure for aortic valve repair. She was started on a weight based heparin infusion pre-operatively. However, her platelet count dropped from 154 thousand/cubic millimeter to 17 thousand/cubic millimeter (89% reduction) within three days of initiating heparin. She became increasingly

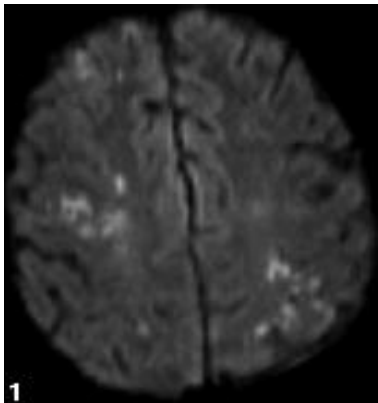


Figure 1: The above diffusion weighted MRI demonstrates acute restriction in the right anterior cerebral artery/middle cerebral artery borderzone, right MCA, right middle cerebral artery/posterior cerebral artery borderzone.

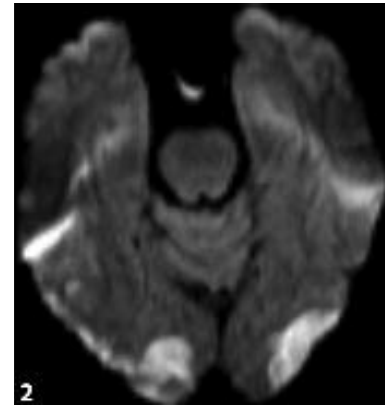


Figure 2: Bilateral occipital lobe restrictions.

confused and demonstrated word-finding difficulties two days after initiation of heparin infusion. Cerebral angiogram showed evidence of emboli. Echo was unrevealing. HIT antibodies were positive. MRI brain was performed four days after beginning heparin.

HIT is a devastating, life-threatening, immune-mediated complication of unfractionated heparin therapy. It can cause substantial morbidity and mortality, especially if associated with disseminated intravascular coagulation, pulmonary embolism, and cerebral infarction [1]. There are limited imaging reports in the literature [2].

References

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2. Saito K, Hirano M, Kajitani M, Taoka T, Kichikawa K, et al. (2009) Cerebral infarction associated with Heparin-Induced thrombocytopenia in a patient with encephalitis. *Inter Med* 48: 71-74.

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