

Acute stroke in 3 brain territories suggests cancer

Over the past several decades cancer has increased to rival heart disease as the leading cause of death in the United States. Non-infectious endocarditis and cancer-associated hypercoagulation (C-AH) have both been suggested as a source of stroke in cancer patients. The importance of recognizing C-AH is appreciated, considering it occurs in as many as 15% of cancer patients and may be the presenting or accompanying manifestation of the illness. A variety of cancers including lung, colon, pancreas, breast and bladder, have been noted with stroke due to C-AH. Clues in the diagnosis of C-AH related stroke include a substantially elevated D-Dimer blood test and/or history of other thrombotic events such as deep venous thrombosis or pulmonary embolism. However, we found three territory acute infarcts on brain MR imaging to be highly suggestive.

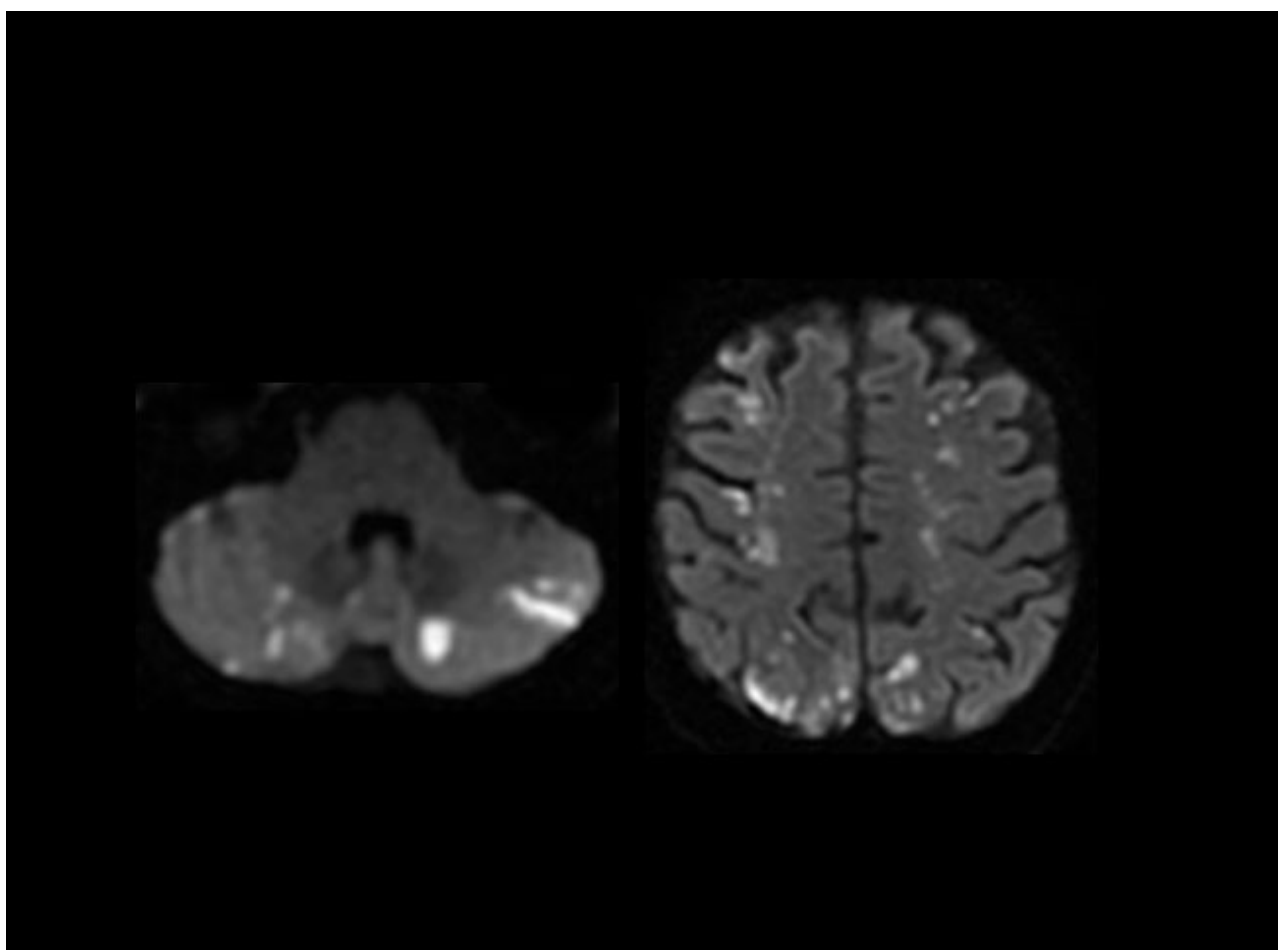


Fig. 1. Acute infarcts on DWI Imaging.

The infarcts are for the most part, small, scattered lesions defined on diffusion-weighted imaging

(DWI) sequence of the MRI. The key feature in the DWI lesions is that they involve 3 areas, specifically the bilateral anterior cerebral circulation and posterior cerebral circulation. The diagnostic importance of 3 territory involvement has not previously been fully appreciated. Moreover, the value in diagnosis of C-AH is appreciated considering the potential for prevention of further strokes with the use of anticoagulation. The application of 3 territory DWI lesions as a marker for C-AH applies in the context of having eliminated other possible causes that include embolic etiologies such as endocarditis, atrial fibrillation, complications of cardiovascular surgery, fat or air emboli, all of which can be readily considered based on patient history. DWI infarcts involving 3 specific vascular territories in the absence of an identifiable source, is highly suggestive of C-AH.

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Publication

[Three-Territory DWI Acute Infarcts: Diagnostic Value in Cancer-Associated Hypercoagulation Stroke \(Trousseau Syndrome\).](#)

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