Another stroke with chest infection?

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A 64-year-old previously healthy man was brought to the emergency department after being found by neighbour in a confused state around 9am in the morning. He was well when last seen the night before. On arrival his temperature was 38°C, pulse 94 and blood pressure 130/80 mmHg. He was agitated, dysphasic and combative. There were some crackles in the right lung base. Neurological exam was difficult however he was moving four limbs possibly less so on the left.

Figure 1. Axial CT shows hypodensity in the right insula cortex

What is the diagnosis?
Answer

Computed tomography (CT) head was reported as showing a subacute right insular cortex infarct (Figure 1). The patient was treated with antibiotics and aspirin. The diagnosis was revised to HSV (*Herpes simplex* virus) encephalitis after review by the medical team. Viral polymerase chain reaction on cerebrospinal fluid confirmed HSV-1 infection.

MRI 3 days later showed diffusion restriction changes consistent with the diagnosis of HSV encephalitis (Figure 2). Timely diagnosis and treatment of HSV encephalitis is essential given the generally poor prognosis in untreated cases. Loss of the insular ribbon is an early CT sign of middle cerebral artery infarction. However, in a delirious patient with fever, HSV encephalitis must be considered.

**Figure 2. Axial Diffusion Weighted MRI (DW-MRI) showed signal changes in the bilateral insular cortex**

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Reference: