Stroke Note

Ventricular Extension of Intracerebral Hemorrhage during Intravenous Thrombolysis

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Case Report

A 69-year-old woman presented to the emergency department with sudden-onset left-sided weakness and sensory loss, neglect and right gaze preference. Acute ischemic stroke was diagnosed and the National Institutes of Health Stroke Scale score was assessed as 19. Her blood pressure was 179/81 mm Hg. Head computed tomography (CT) showed early ischemic change and the Alberta Stroke Program Early CT score was 8 without evidence of hemorrhage [1]. There was no contraindication to thrombolysis and alteplase was administered 95 min after the onset of her symptoms.

The patient consented to participation in a magnetic resonance imaging (MRI)-based research study. She underwent a perithrombolysis MRI scan with initial diffusion-weighted imaging confirming extensive acute ischemic stroke and no evidence of hemorrhage at that time (fig. 1a, c). Six minutes into the sequences, an increasing mass effect was noted on the reformating images within the head of the right caudate and ventral putamen (fig. 1c). Alteplase was discontinued as this was thought to be secondary to intracerebral hemorrhage. At this time the patient was clinically stable, but she became obtunded over the following hour. Immediate CT confirmed extensive intraventricular hemorrhage with early hydrocephalus (fig. 1b). Following discussion with her family and in light of her clinical state, a decision was made to provide palliative care. The patient died 2 days later.

Reformatting of the imaging demonstrated the progression of the intracerebral bleed. In this video (online suppl. video 1; see www.karger.com/doi/10.1159/000355144 for all online suppl. material), a secondary hematoma can be seen shrinking as blood dis- gorges into the ventricles.

Discussion

Hemorrhagic transformation is the most feared complication of intravenous thrombolysis and occurs in approximately 5% of patients treated with alteplase [2, 3]. Predicting and defining those patients who will suffer this potentially life-threatening complication is challenging [4, 5]. Here, we present a unique video of ventricular extension of a secondary hemorrhage in a patient receiving intravenous thrombolysis. The extent of the ischemic injury meant that the clinical manifestations of the hemorrhage did not occur until some time after the bleeding had extended into the ventricles.

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References


