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Mechanical thrombectomy for acute ischemic stroke: A case study using the penumbra stroke system.

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Abstract:

Over recent years, there have been dramatic advances in the ability to treat an acute ischemic stroke. Thrombolysis with intravenous recombinant tissue plasminogen activator can now be performed up to 4.5 hours after stroke onset in certain circumstances, and new mechanical thrombectomy devices allow intervention up to and beyond 8 hours in some cases. The Penumbra Stroke System (Penumbra Inc., Alameda, CA), one of these mechanical thrombectomy devices, uses a series of catheters to aspirate thrombus from occluded cerebral arteries and thus restore blood flow to the adjacent ischemic brain. This case study highlights the clinical and procedural issues involved in the treatment and postprocedural care of a patient with an acute ischemic stroke treated with the Penumbra Stroke System.

Keywords:

Acute ischemic stroke, interventional neuroradiology, neuroendovascular surgery, neuroscience nursing, Penumbra Stroke System, radiology technologist.