

Acute ischemic stroke in the first trimester of pregnancy: Is it safe for mechanical thrombectomy?

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ABSTRACT

Introduction: Acute ischemic stroke (AIS) during pregnancy is a rare but serious condition with significant maternal and fetal risks. The management of AIS in pregnant women, especially in the first trimester, presents unique challenges due to concerns about the safety of thrombolytic therapy and the potential effects of ionizing radiation from mechanical thrombectomy on the fetus. **Case Description:** We report a rare case of a young woman in her first trimester of pregnancy who presented with acute onset of right-sided weakness, slurred speech, and facial asymmetry. Non-contrast computed tomography (NCCT) of the brain ruled out intracranial haemorrhage, and subsequent magnetic resonance angiography (MRA) identified a left proximal M1 occlusion. Given that she was beyond the window for thrombolysis, mechanical thrombectomy was performed successfully with radiation protection measures in place. Post-procedure, the patient was managed by a multidisciplinary team and showed significant neurological improvement within 12 days. She continued her pregnancy without further complications and delivered a healthy baby at near term. **Discussion:** This case highlights the feasibility and safety of mechanical thrombectomy for AIS in early pregnancy. Despite limited data, current evidence suggests positive maternal and fetal outcomes with this approach. Concerns about fetal radiation exposure can be mitigated with appropriate precautions, supporting the use of mechanical thrombectomy as a viable option when thrombolysis is contraindicated.