Medical Policy
Mechanical Embolectomy for Treatment of Acute Stroke

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Policy Number: 184
BCBSA Reference Number: 2.01.76

Related Policies
- Endovascular Procedures - Angioplasty and Stenting - for Intracranial Arterial Disease - Atherosclerosis and Aneurysms, #323
- Computed Tomography Perfusion Imaging, #448

Policy
Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO BlueSM and Medicare PPO BlueSM Members

Mechanical embolectomy in the treatment of acute stroke is INVESTIGATIONAL.

Prior Authorization Information
Commercial Members: Managed Care (HMO and POS)
This is NOT a covered service.

Commercial Members: PPO, and Indemnity
This is NOT a covered service.

Medicare Members: HMO BlueSM
This is NOT a covered service.

Medicare Members: PPO BlueSM
This is NOT a covered service.
**CPT Codes / HCPCS Codes / ICD-9 Codes**

The following codes are included below for informational purposes. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member’s contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

**CPT Codes**

<table>
<thead>
<tr>
<th>CPT codes:</th>
<th>Code Description</th>
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<tbody>
<tr>
<td>37184</td>
<td>Primary percutaneous transluminal mechanical thrombectomy, noncoronary, arterial or arterial bypass graft, including fluoroscopic guidance and intraprocedural pharmacological thrombolytic injection(s); initial vessel</td>
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<tr>
<td>37185</td>
<td>Primary percutaneous transluminal mechanical thrombectomy, noncoronary, arterial or arterial bypass graft, including fluoroscopic guidance and intraprocedural pharmacological thrombolytic injection(s); second and all subsequent vessel(s) within the same vascular family (List separately in addition to code for primary mechanical thrombectomy procedure)</td>
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**Description**

Over 750,000 strokes occur annually in the United States. Approximately 80% of these will be diagnosed with ischemic brain injury, caused by emboli (clots formed elsewhere) or thrombi (clots formed locally in the vessel itself) and these frequently present as acute neurologic emergencies. Recanalization of the vessel, particularly in the first few hours after occlusion, has been shown to reduce rates of disability and death. Treatment of ischemic stroke has focused on the use of intravenous tissue plasminogen activator (tPA) to promote dissolution of the clot and subsequent restoration of blood flow to the ischemic area of the brain. Because tPA is associated with an increased risk of intracranial bleeding, it is contraindicated in hemorrhagic stroke and in ischemic stroke patients with a hypocoagulable state, or advanced age. Tissue plasminogen activator (tPA) given intravenously within 3 hours of symptom onset has demonstrated improved neurological outcome. However, pharmaceutical thrombolytics may take as long as 2 hours to dissolve a thrombus and many patients are ineligible for thrombolytic therapy.

Mechanical embolectomy is being studied as a method of stroke treatment. Intracranial clots can be located in large or small vessels. Some small vessels are too tortuous to be accessed with available technology, and therefore thus mechanical embolectomy is being investigated for this use. A number of mechanical thrombolysis devices have entered clinical trials. These devices use a variety of techniques to physically remove the clot.

Examples of mechanical thrombolysis devices include The Merci® Retriever from Concentric Medical, Inc and the Penumbra System™ from Penumbra, Inc. All mechanical thrombolysis devices for the treatment of acute stroke are considered investigational regardless of the commercial name, the manufacturer, or FDA approval status.

**Summary**

The scientific evidence does not permit conclusions concerning the effect of mechanical embolectomy on patient outcomes. The existing observational data are not sufficient to determine whether this approach
improves net health outcomes. Single-arm studies report a high rate of recanalization of the infarcted vessel; however, only a subset of patients with successful recanalization achieves good functional outcomes. Comparison with historical controls receiving thrombolysis suggests higher rates of recanalization with embolectomy but lower rates of good functional outcomes. Given the lack of controlled studies to assess the impact of this treatment compared with alternatives, the use of embolectomy devices for acute stroke is considered investigational.

**Policy History**

<table>
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<tr>
<th>Date</th>
<th>Action</th>
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<tbody>
<tr>
<td>12/2013</td>
<td>New references from BCBSA National medical policy.</td>
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<tr>
<td>5/1/10</td>
<td>New policy, effective 5/1/2010, describing ongoing non-coverage.</td>
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**Information Pertaining to All Blue Cross Blue Shield Medical Policies**

Click on any of the following terms to access the relevant information:
- Medical Policy Terms of Use
- Managed Care Guidelines
- Indemnity/PPO Guidelines
- Clinical Exception Process
- Medical Technology Assessment Guidelines

**References**


