Mechanical embolectomy in cerebral infarction

Patient 1. A man in his 70s was admitted with acute right-sided paralysis. The neurological outcome was scored on the National Institutes of Health Stroke Scale (NIHSS) to 21 points (severe cerebral infarction), and intravenous thrombolytic therapy was administered. The image to the left shows cerebral angiography with contrast injection in the left internal carotid artery, a) before and b) after embolectomy of a so-called T-occlusion (arrows) in the left carotid siphon and middle cerebral artery. The thrombus was removed and blood flow to the left hemisphere was restored 195 minutes after symptom onset. Further workup revealed atrial fibrillation and an embolic cerebral infarction in the middle cerebral artery territory. The patient received anticoagulation therapy with rivaroxaban. The NIHSS score was 0 points at follow-up three months later.

Mechanical embolectomy of large intracerebral arteries may be indicated both after intravenous thrombolytic therapy and in some cases when this therapy is contraindicated (1). Endovascular recanalisation in anterior (patient 1) and posterior (patient 2) circulation can result in rapid clinical improvement.

We lack good data that document the benefit of mechanical embolectomy versus medical management. Several studies report a higher recanalisation rate after mechanical embolectomy (2), while the effect on function level and mortality is under debate (3). Appropriate selection can be decisive for the clinical result. The procedure ought for the time being to be done within a registered trial or as part of a randomised, controlled study.

The patients have consented to the publication of this article.

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