



## LECTURE

# Treatment of acute ischaemic stroke: an updated protocol for patient selection

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### Abstract

Stroke is one of the leading causes of death and morbidity in industrialized countries. Diagnosis and treatment options have largely evolved in the last decades with the aim of rapidly restoring flow in the occluded vessels.

Evidence to support mechanical thrombectomy for stroke has previously been poor because randomised trials have used low efficacy thrombectomy devices, insufficient selection criteria, and had long delays from symptom onset to reperfusion. In early 2015, five individual trials (MR CLEAN, ESCAPE, EXTEND-IA, SWIFT PRIME and REVASCAT) established that thrombectomy with newer generation devices significantly reduces disability rates after acute ischaemic stroke due to large vessel occlusion, rendering the high-level recommendation for mechanical thrombectomy treatment in patients presenting within 6 hours after symptom onset. By pooling patient-level data from the five trials, the HERMES

collaboration further concluded that the consistent results across different patient populations suggested that benefit from thrombectomy could be generalizable to a broad range of patients with large-vessel occlusion regardless of age, initial stroke severity and patient non-eligibility for intravenous rtPA.

More recently, the DAWN and DEFUSE-3 trials also proved the benefit of mechanical thrombectomy in a subgroup of patients presenting from 6 to 24 hours after symptom onset and meeting specific advanced imaging criteria. In the past 3 years, many other trials, reviews, guidelines and meta-analyses have been published, leading the American Heart and the American Stroke Association to release new guidelines in February 2018. All these trials and guidelines have been the basis for the establishment of local and regional consensus for the approach, management and treatment of patients with acute ischaemic stroke and large vessel occlusion.

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