

Endovascular Therapy in Ischemic Stroke with ICH risk prediction

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Abstract

Endovascular therapy (EVT) is lifesaving in ischemic strokes with statistically significant benefit in several subgroups of HERMES collaboration. DAWN and DEFUSE trials have revolutionized the endovascular therapy in stroke by extending the window period for management beyond 6 hours. Procedures include stent retrievers, aspiration devices and intra-arterial thrombolytics. Despite good outcomes, EVT is not free of complications, intracranial hemorrhage (ICH) being the most dreaded. Risk is maximum during the first 24-48 hours of ischemic stroke. ICH may be symptomatic (sICH) or asymptomatic, however, different defining criteria have been used previously in literature (ECAS III, NINDS, Heidelberg bleeding classification). Management consists of lowering the blood pressure, reversing anticoagulation, medical management to maintain intracranial pressure, surgery with decompression with or without haematoma evacuation and intensive care support. Although the HERMES collaboration showed no significant difference between controls and patients undergoing EVT (4.3 vs 4.4 percent, respectively), the goal of endovascular stroke therapy may be accomplished if clinically appropriate risk prediction of ICH in these patients is possible with further reduction in complications. This has aroused interest amongst researchers in devising risk prediction models. Infarct size > 1/3 of vascular territory, high serum glucose and high thrombectomy maneuver counts have been significantly associated with worse outcomes and higher risk of developing ICH. The most recent introduction of TAG score (TICI, ASPECTS and Glucose), with high TAG scores associated with sICH, may significantly impact the outcome and alert physicians to keep this cohort of patients under close monitoring.

Biography:

Chirag Jain has completed his MBBS (gold medalist), MD (gold medalist) and DNB (gold medalist) in Radiology from Delhi, India. He is neurointerventionist at PGIMER, Chandigarh, India. He has conducted researches in diagnostic neuroradiology with published papers in leading journals like Neuroradiology, Indian Journal of Radiology and Imaging. He has received grant in RSNA 2018. Chirag has keen interest in endovascular management of vascular pathologies like stroke, AVM and aneurysms and has performed over 200 diagnostic and therapeutic endovascular procedures.

Recent Publications:

1. Intracranial Hemorrhage risk factors after thrombectomy in anterior circulation Ischemic Stroke
2. ACOG Committee Opinion No. 723: Guidelines for Diagnostic Imaging during Pregnancy and Lactation
3. Should proper estimation of sample size be required in RCT?