Thrombectomy-related emboli: Direct aspiration vs. stent retriever thrombectomy for acute ischemic stroke; our experience and literature review

Background and Purpose: Thrombectomy related emboli (TRE) represent a potentially dangerous complication of thrombectomy procedures for acute ischemic stroke. In this study, we compared the rate of TRE in primary aspiration and stent retriever techniques.

Patients and Methods: We retrospectively compared the clinical and radiological outcomes of two groups of consecutive stroke patients; aspiration thrombectomy (ASP) group and stent retriever thrombectomy (SRT) group, with TRE rates as a primary study endpoint. The relevant literature was also reviewed.

Results: Each group contained 35 patients; the rate of tandem lesions was 34.3% in SRT group and 28.6% in ASP group. The rate of unaffected territory emboli (uTRE) was higher in the (SRT) group (14.2%) compared to the (ASP) group (2.8%), while there were no significant differences regarding pre-emboli and affected territory emboli (aTRE). The ASP group was superior to the SRT group in terms of successful recanalization (97.1% vs. 77.1%, P=0.02), mean number of passes/case (2.0 vs. 3.3, P=0.04) and mean operative time (34.1 vs. 84.8 min, P=0.000007).

Conclusions: Aspiration-only thrombectomy technique shows fewer rates of uTRE and an excellent rate of successful recanalization in less operative time compared to stent retriever thrombectomy. The rate of TRE in our aspiration group was less than or comparable to that in most of the published studies.

Biography
Esameldin Gaber Saleh Elsayed is Professor and chairman of Neurosurgery department at Monofyia University, Egypt. He did his Bachelor of medicine and surgery at Alexandria university in 1987 and master’s degree in surgery at Alexandria University in 1992. He did his Doctorate in Neurosurgery and skull base surgery from Alexandria University in 1998. He pursued his PhD in skull base surgery from UAMS, the USA in 1998. He got his Fellowship of skull base surgery from UAMS, the USA in 1998. He worked as a Supervisor and examiner of 45 master and Doctorate thesis. He is a Member of the Egyptian examiner board of master and Doctorate degrees.

Notes: