

Mechanical thrombectomy for the posterior circulation stroke: analysis of outcomes and comparison to anterior circulation large vessel occlusion treatment.

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Introduction: Mechanical thrombectomy (MT) is now well-established method for anterior circulation large vessel occlusion (LVO) treatment. There is, however, no solid evidence of its efficacy in the setting of posterior circulation LVO. We present the comparison of treatment outcomes and periprocedural complication rates in both groups. Material and methods: We reviewed the Clinical Regional Hospital No. 2 in Rzeszów local MT-treatment database. The baseline characteristics, site of occlusion, procedural times, and presence of successful reperfusion, procedural complications, outcomes and mortality at 3 months were analyzed. Results: 77 patients (48% woman, median age 70, IQR 61-79) were treated with MT (Solitaire FR or Penumbra system) between January 2013 and December 2016. 14 (18%) had posterior and 63 (82%) anterior circulation LVO. There was no significant difference in age and baseline National Institutes of Health Stroke Scale (NIHSS) score in the posterior circulation cohort ($p=0.05$). The median time to treatment was significantly longer than anterior circulation LVO group (median (IQR) 283 min (225-360) vs 220 min (180-288), $p=0.008$). There was none symptomatic intracerebral hemorrhage (sICH) identified (0% vs 8%, $p=0.58$). The posterior group showed tendency to higher reperfusion rates (85.7% vs 66.7%, $p=0.21$) and better outcomes (mRS=0-2) at 3 months (57.1% vs 37.7%, $p=0.23$). Mortality rates were similar in both groups (28.6% vs 27.9%, $p=1$). Conclusion: MT for the posterior circulation LVO stroke is not associated with higher complication rates and mortality than anterior occlusion treatment. High reperfusion and good outcome rates could be achieved.