5-2019

Recurrent Thrombectomy in Patients with Prior Mechanical Endovascular Revascularization: A Single Center Experience

Ghada A. Mohamed
Khadija Arshad
Muhammad Affan
Mohammed Ismail
Owais Alsrouji

See next page for additional authors

Follow this and additional works at: https://scholarlycommons.henryford.com/merf2019clinres
Authors
Ghada A. Mohamed, Khadija Arshad, Muhammad Affan, Mohammed Ismail, Owais Alsrouji, Daniel J Miller, Maximillian K Kole, and Horia Marin
Recurrent Thrombectomy in Patients with Prior Mechanical Endovascular Revascularization: A Single Center Experience

Ghada A. Mohamed¹, Khadija Arshad¹, Muhammad Affan¹, Mohammed Ismail¹, Owais Alsuruji¹, Daniel Miller¹, Max Kole², Horia Marion³

1- Department of Neurology Henry Ford Hospital 2- Department of Neurosurgery Henry Ford Hospital 3- Department of Radiology and Interventional Neurology Henry Ford Hospital
Introduction

- Mechanical endovascular reperfusion therapy (MER) is now the standard of care for treatment of large vessel occlusion (LVO) acute ischemic stroke.
Nearly 25% of all stroke patients have a recurrent event within 5 years.
But what about recurrent LVO?
In 2017 Bosulma et al. studied 697 patients who underwent endovascular, Fifteen (2%) of treatment for acute ischemic stroke (AIS) over the study period were treated with RT.

- Successful reperfusion was achieved in 14/15 patients after the first thrombectomy and in all patients after RT.
- No parenchymal hemorrhage was observed after the first procedure and two were noted after the repeated intervention.
- The rate of good clinical outcome at 90 days in RT patients was 60% and their 90-day mortality rate was only 20%.
Methods:

- We conducted case series study of Henry ford health system endovascular database for patients who underwent RT from March 2016 till March 2018.
- Demographic data, clinical presentation, imaging, procedural data and clinical outcomes were evaluated.
Results:

- Of the total 145 patients with AIS that received MER, 8 (5.5%) RT occurred in 5 patients.
- Mean age was $67 \pm 21$ years. Four of the five patients were females.
- All five patients achieved successful reperfusion (TICI 2b-3).
- Three patients underwent one RT, one had two RT, and one had three RT.
- Cardio-embolic source (80%) was the most common etiology and ESUS etiology was (20%).
Results cont.

- The time between the first to last MER for each patient ranged from 3 days to 2 years.
- All patients were optimized on their medical therapy after the first stroke.
- Four of the five patients (80%) had RT in the same vascular territory.
- One patient had post-procedure focal high-grade stenosis after the 3rd intervention in the same artery that was treated later with elective angioplasty.
- One RT was complicated with fatal intracranial hemorrhage due to late presentation despite presence of large area of penumbra.
- Average 3 months follow up MRS was 2.
Conclusion:

- In patients presented with recurrent LVO, RT appears to be effective and relatively safe. Based on the available literature, prior MER should not discourage aggressive treatment that may potentially lead to a good clinical outcome.
- It is unclear if prior MER therapies cause endothelial injury leading to a predilection for local in-situ thrombus or denovo stenosis formation predisposing to re-occlusions.
- The risk of reperfusion injury in a recently infarcted territory should be weighted carefully when considering as hemorrhagic complications remain possible.
Questions?
THANK YOU