CNS CNS **218** ANNUAL MEETING HOUSTON, TEXAS OCTOBER 6-10, 2018 Time To Evacuation in Endoscopic Minimally Invasive Intracerebral Hemorrhage Evacuation

Jacopo Scaggiante MD; Alexander G Chartrain BS; Jonathan S Pan; Adam Lieber; Dominic Anthony Nistal MD FACS; Jamie Rumsey; Robert J. Rothrock MD; Joshua B. Bederson MD; J Mocco MD, MS; Christopher P. Kellner MD Icahn School of Medicine at Mount Sinai Department of Neurosurgery



Introduction

As minimally invasive intracerebral hemorrhage evacuation undergoes formal investigation in ongoing clinical trials, there is debate about the ideal timing for this procedure with some surgeons arguing that earlier is better given the time and dose dependent nature of the hematoma toxicity on the surrounding brain while others argue that evacuation is safer after a period of time to permit coagulation of the offending blood vessel and/or liquification of the hematoma.

Methods

Endoscopic minimally invasive intracerebral hemorrhage evacuation was performed on 81 patients between December 2015 and January 2018 who presented to the Mount Sinai Health System.

Retrospective analysis of prospectively collected data was performed. Patients were divided into four groups according to time to evacuation:

ultra-early (<12 hours), early (<18 hours), within 24 hours and delayed (>24 hours). We compared these groups with modified Rankin Scale (mRS), functional independence (defined by mRS= 0-2) and mortality (defined by mRS=6) at 30 days and 90 days.

Results

- Follow-up at 90 days was available for 62 of 81 patients.
- Mortality at 30 and 90 days increases from 0% in the ultra-early group to 12% in the within 24 hour group.
- There is a significant association between time to treatment <12 hours and functional independence at 30 days (OR= 2.17; C.I. = 0.02-0.53) that is maintained until 18 hours from bleeding (OR= 2.09; C.I. = 0.01-0.43).

Conclusions

There is a significant association between time to treatment and clinical outcome that suggests **better chance of functional independence at 30 days for patients treated within 18 hours** from ICH ictus.

Additional studies are necessary to further investigate this relationship between time to evacuation and outcome in endoscopic minimally invasive ICH evacuation

Learning Objectives

- By the conclusion of this session, participants will have
 - gained a general understanding of the timing for endoscopic ICH evacuation,
 - been provided with insights into our institution's experience creating a comprehensive ICH program at one of our hospitals,
 - have learned about our initial results performing endoscopic ICH evacuation.

Figures



Figure: Endoscopic bipolar cauterization of a bleeding vessel during minimally-invasive ICH evacuation.