Initial Experience of Minimally Invasive Intracranial Hematoma Evacuation with Artemis Neuro Evacuation Device – A Case Series

Paul S. Saphier, MD \(^1\); Ronald P. Benitez, MD \(^1\)

\(^1\)Atlantic Neurosurgical Specialists, Overlook Medical Center, Summit, NJ
Disclosure

- Consultant to Penumbra, Inc.
Introduction

- We report a case series utilizing Artemis Device® for removal of intracerebral hemorrhage (ICH)

- Artemis Device is a neurosurgical tool indicated for controlled aspiration of tissue and/or fluid during surgery of the Ventricular System or Cerebrum in conjunction with a Penumbra Aspiration Pump
Case 1

- 70 year-old male
- History of hypertension and chronic obstructive pulmonary disease
- 70-mL left basal ganglia hemorrhage and cerebral edema
- Presented with mass effect, global aphasia and right-sided hemiplegia
- Received desmopressin and platelet transfusion
- Two days following the ictus, he underwent endoscopic-assisted navigational guided evacuation of ICH through occipital craniotomy using Artemis Device
Post Procedure

- Post operative imaging demonstrated approx. 50% hematoma evacuation
- Significant improvement in the mass effect
- Neurologically stable post procedure
- No procedure-related complications occurred
Case 2

- 38 year-old male
- History of intrinsic coagulopathy and hypertension
- 74-mL right basal ganglia hemorrhage
- Left-sided hemiplegia and altered mental status, progressing to coma, requiring emergent intubation
- Correction of coagulopathy
- Six hours post ictus, MIS with Artemis device
Post Procedure

- Post-operative imaging demonstrated 85% hematoma evacuation
- Significant improvement in the mass effect
- Improved clinically
- No procedure-related complications
Case 3*

**Pre Procedure**
- 50 year-old male
- History of hypertension, atrial fibrillation, and multiple sclerosis (currently in remission)
- Right-sided basal ganglia hemorrhage, left-sided hemiplegia, and aphasia
- CT of head revealed hematoma at right basal ganglia with mild edema and compression at right lateral ventricle and no midline shift
- MIS using Artemis Device
- No further bleeding was noted

**Post Procedure**
- Patient was stable with trace left-sided movements to noxious stimuli.
- No procedure-related complications

*Images not obtained
Summary

The present case series showed that the Artemis Neuro Evacuation Device was able to successfully evacuate hematoma in the setting of ICH