



## SSG CASE REVIEW

# Trans-Sulcal Surgical Approach with 95mm Tubular Retractor Deep Left Basal Ganglia Hemorrhage

### Clinical Presentation

The patient is a 39-year-old right-handed male. He presented to an outside ER at 12:58 after experiencing weakness in the right arm and leg and slurred speech. A head CT was completed that showed a **left basal ganglia hemorrhage of ~20cc**. He was transferred to Dell Seton Medical Center where he was **somnolent, aphasic, unable to follow commands and only opened his eyes intermittently**. He was **localizing on the left side with minimal movement in the right upper extremity and experienced right-sided facial drop**. A follow-up head CT was taken which showed enlargement of left basal ganglia hemorrhage with surrounding cerebral edema. There was a 5mm midline shift with small subfalcine herniation. After discussing with family, patient was brought to the OR and cut time was recorded at 17:27.

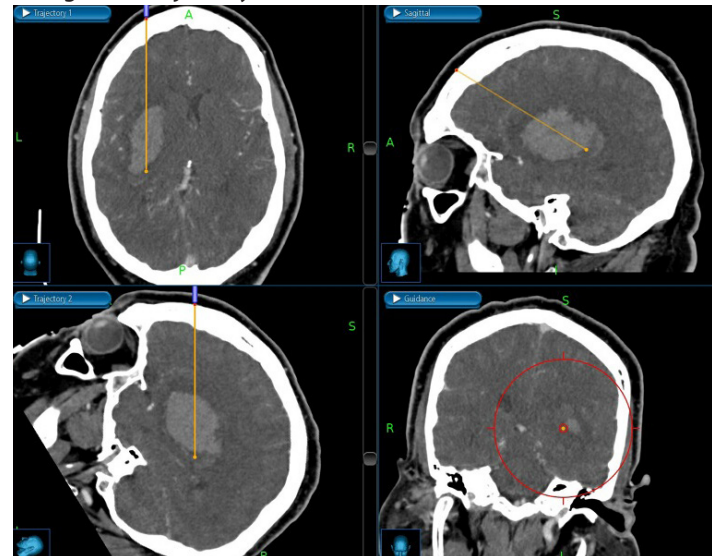
### Surgical Management

A left frontal craniotomy was planned to run parallel to the arcuate fasciculus and avoid corticospinal fibers. The **distance from the frontal cortex to the posterior aspect of the hemorrhage was 101mm**. A new 95mm tubular retractor was used to access the hemorrhage. No mannitol or hypertonic saline were administered. After opening the pia, the middle frontal sulcus was entered following the trajectory planned. The clot was evacuated utilizing an automated resection device. Total surgical time was 99 minutes.

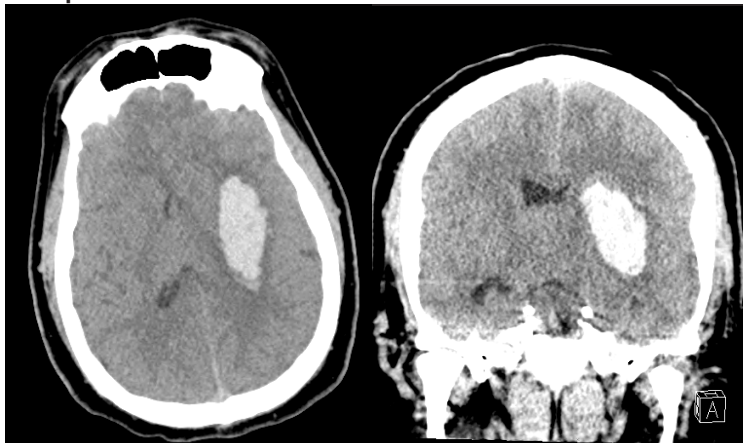
### Clinical Course & Outcomes

A post-operative head CT was done approximately 2 hours after surgery. At that time, the patient was still intubated, but awake and alert. He was following commands on the left and hemiplegic on the right. He was extubated the next day. His right hemiplegia did not improve in the hospital and his aphasia improved minimally. Patient remained in the ICU for 15 days due to difficulty controlling blood pressure. Neurologically, he was stable, awake and alert. He was discharged to a rehabilitation facility POD 18 when his blood pressure was well controlled with medication. At his one month follow-up, the patient's **aphasia improved remarkably**. He had **no difficulty with comprehension**. He was **able to speak in full sentences**, but did have some word finding difficulty. Hemiplegia remained the same.

### Navigation Trajectory Plan



Pre-Operative CT at 15:00



Post-Operative CT at 21:00

