

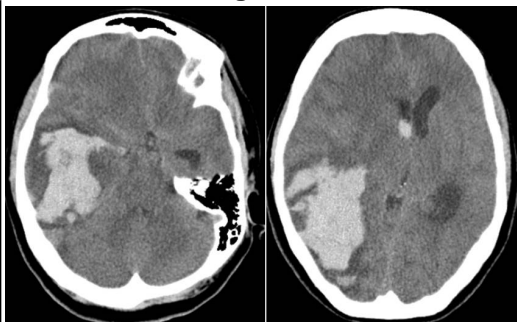
Introduction

Spontaneous intracerebral hemorrhage (SICH) is a disease that affects up to 52,400 people a year. It can account for as many as 20% of the annual incidence of stroke. Surgical intervention for SICH remain equivocal at best, given the often deep-lying location of the hematoma. Recent publications place an increasing emphasis on endoscopic or stereotactic aspiration techniques to minimize brain stretch. We present our institutional experience performing open surgery to treat a select group of patients with SICH

Methods

A retrospective chart review was performed between January 2013 and December 2014. 25 patients met inclusion criteria for SICH that underwent surgical intervention. Of the 25 patients, 10 patients underwent decompressive hemicraniectomy with hematoma evacuation.

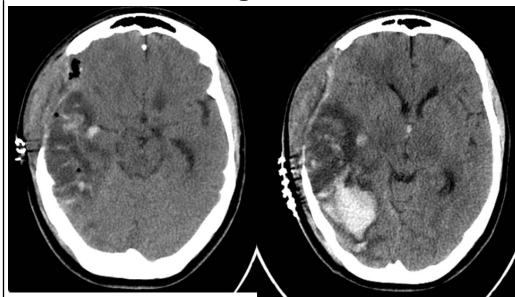
Figure 1



Results

Surgical technique involved performing at least a 12x15cm hemicraniectomy with duraplasty. After bony decompression, the hematoma was evacuated, removing only the portions closest to the surface and portions that were easily removed. The average age was: 54 years (range: 21-81), the median presenting GCS: 6T (range: 4T-13). The ICH score predicted mortality was 72% in 90% of the patients. In contrast, our series had one mortality within 30 days. The average pre-operative volume was: 64.3ml (range: 30-150), with 90% of patients having >5mm midline shift on initial imaging. In 7 out of 10 patients, the hematoma was within 1cm from the surface. The post-operative GCS was 15 for 7 out of 10 patients, who underwent subsequent cranioplasty.

Figure 2

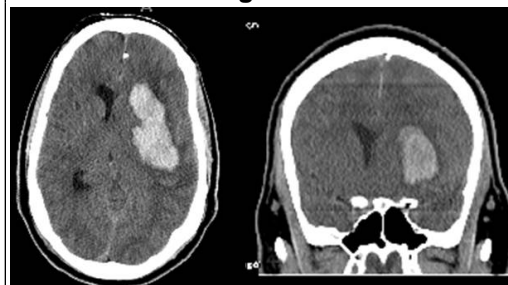


Case # 1 : Post-treatment

Conclusions

Newer technology and techniques may be the avenue to improve surgical outcomes for SICH. Open microsurgery for these lesions still remains a viable option in a select group of patients, which allow for better than predicted 30-day mortality rates. Another consideration is the need for hematoma evacuation, which was usually performed due to ease of accessibility. One hypothesis for our small cohort's better than predicted outcome is that the majority of patients underwent evacuation within 4 hours of acute neurologic decline.

Figure 3



Case # 2 : Pre-treatment

Figure 4



Case # 2 : Post-treatment

Learning Objectives

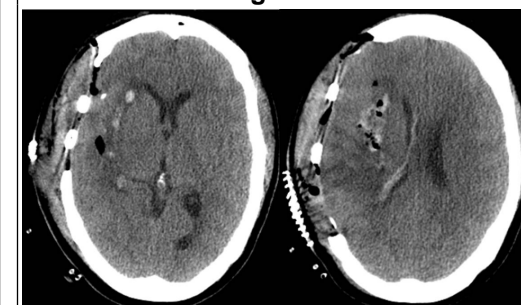
We present an institutional experience showing better than expected outcomes for the open microsurgical treatment of spontaneous intracerebral hemorrhages.

Figure 5



Case #3: Pre-treatment

Figure 6



Case #3: Post-treatment