

Surgical Treatment of Unruptured Aneurysms: 10 Year Single Surgeon Experience at University of Cincinnati Medical Center

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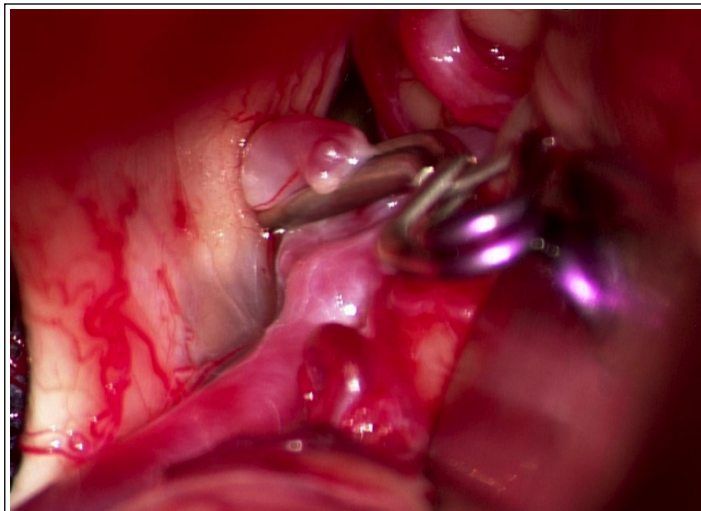


Introduction

The International Study of Unruptured Intracranial Aneurysms (ISUIA) reported a 12.6% morbidity and mortality rate at 1 year for surgical intervention of unruptured intracranial aneurysms (UIAs). This was higher than the 5 year rupture rate for anterior circulation aneurysms <12 mm and posterior circulation aneurysms <7 mm (1). These findings have been used as an argument against the surgical treatment of these aneurysms. Several groups have demonstrated better surgical outcomes for aneurysms in high versus low volume centers (2,3). We therefore reviewed the experience of a single high-volume surgeon in the treatment of UIAs.

Methods

The medical records of all patients who underwent microsurgery for an UIA from July 2005 to July 2015 at our institution by a single surgeon were reviewed. Baseline demographics and aneurysm characteristics were reviewed. Outcomes included discharge disposition, hospital length of stay, complications, surgery-related death, and post-operative mRS of 3-5 at 30 days, 1 year and last follow-up.



Results

During the reviewed period, 447 UIAs in 395 patients were identified. The average age was 63.2 years, and 58% were females, 42% were males. The average aneurysm size was 9.3 mm. Twenty-eight percent of patients had multiple aneurysms, and 17% had multiple aneurysms clipped at the same time.

The average length of hospital stay was 3.3 days. 96% of patients were discharged to home. No surgery-related deaths were reported. New post-operative cranial nerve deficits were noted in 7% of patients, but persisted at last follow-up in only 1.5%. A post-operative mRS of 3-5 was noted in approximately 1.3% of patients at last follow-up.

Conclusions

The surgical morbidity and mortality related to the treatment of UIAs may differ between surgeons and institutions. Some individuals may have better outcomes than what have been previously published in large, multi-center trials.

References

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