

## **Advantage And Limitations Of Supraorbital Keyhole Craniotomy For Unruptured Anterior Circulation Aneurysms**

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### **Background:**

Supraorbital keyhole approach provides access to the major part of the anterior circulation aneurysms. Herein, our surgical experience of supraorbital keyhole approach for the clipping of anterior circulation aneurysms and its limitation and complication have been proposed.

### **Methods:**

A retrospective analysis was performed on 67 consecutive patients harboring 70 aneurysms with unruptured intracerebral aneurysms who underwent surgical treatment at the Department of Neurosurgery, XXX, from June 2011 to December 2013.

### **Results:**

The supraorbital keyhole approach to clipping the unruptured anterior circulation aneurysm gains a good result. Of 70 aneurysms, 63 aneurysms were clipped successfully by the supraorbital approach, and the incomplete occlusion (partial clipping, wrapping) rate was 10%. One mortality patient is developed a cerebrospinal fluid leak, and secondary infection from nasal sinusitis. Chronic subdural hemorrhage is developed from 2 patients. All of them needed burrhole operation. One patients experienced permanent partial supraorbital hypesthesia as a result of lesion of the supraorbital nerve.

### **Conclusions:**

The supraorbital keyhole approach is recommended for selected anterior circulation aneurysms based on based on improvements in diagnostic imaging, advanced surgical instruments, and microsurgical skills. The keyhole approach may be an acceptable for small noncomplex aneurysms.