



Clinical and Cosmetic Results of the Modified Minipterional Craniotomy for Unruptured Aneurysm Clipping

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Introduction

The modified minipterional craniotomy uses a linear fascia and muscle splitting technique, which allows for a shorter incision, more facile re-apposition, and reduced bulk of retracted tissue. We describe this modified minipterional craniotomy and report on the clinical and cosmetic outcomes for patients undergoing aneurysm clipping.

Methods

A prospectively collected database of all open cerebrovascular cases performed at VUMC from 2012 to 2014 was screened for patients with surgical clipping of intracranial aneurysms via the modified minipterional craniotomy as the primary treatment. Demographic and clinical variables were collected from the medical records, and assessed with descriptive statistics.

Results

The mean patient age was 53 ± 9 years, and 15 (68%) were female. There were 24 aneurysms clipped in 22 patients in 22 operations, without technical difficulty or intraprocedural complication. All cases were discovered incidentally. Complete obliteration was achieved in 22 (92%); 2 (8%) had a very small dog-eared remnant. The procedure-related complication rate was 5% (CSF leak). There was no post-operative mortality. All patients were modified Rankin scale (mRS) 0-1 at last follow-up. All patients had satisfactory cosmetic outcome; there was no temporal wasting, and scars were small and easily hidden beneath the patient's hair.

Conclusions

Surgical clipping of intracranial aneurysms using the modified minipterional is safe and efficacious. The obliteration and complication rates were within the range of acceptable risks dictated by the current literature, with satisfactory cosmesis.