

Endoscopic Assisted Eyebrow Craniotomy for Anterior Cranial Fossa Lesions: Clinical and Cosmetic Outcomes.

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Abstract

Background: The eyebrow supraorbital keyhole approach could be considered a modified minimally invasive model for the classic pterional subfrontal approach in which an eyebrow incision and supraorbital mini craniotomy are performed for exposure of the anterior cranial fossa corridor. **Methods:** This study was retrospectively conducted on twenty four patients, age ranging from 20 to 65 years old, with anterior cranial fossa lesions who were meeting the eligibility criteria for eyebrow craniotomy in the period from August 2019 to January 2023. These patients were operated through eyebrow supraorbital approach in which microscopic endoscopic assisted technique were used. Extent of resection, clinical and cosmetic outcomes and complication incidence were assessed. **Results:** We included the twenty four patients who met inclusion criteria (17 females and 7 males) their ages ranged from 20 to 65 years. The most common pathology was meningioma in 19 patients. Two patients experienced supraorbital loss of sensation and only one patient experienced palsy of frontalis branch of facial nerve. Frontal sinus was breached in 3 patients with no patient experienced postoperative CSF leak. Total excision was accomplished for 23 patients. Four patients who had preoperative visual compromise, improvement of visual acuity and field defects was observed in 3 patients. No major intraoperative complications occurred. All patients filled cosmetic satisfaction questionnaire during their outpatient visits. For the eyebrow supraorbital approach, no incision related intolerable pain, no craniotomy defects or irregularities, no cosmetic complaints nor limitation of jaw opening were reported, and only minor symptoms in the form of limited eyebrow elevation, swelling and numbness in the forehead. **Conclusions:** The eyebrow craniotomy could be used safely as a more cosmetic and minimally invasive approach for a variety of anterior cranial fossa lesions.