Comprehensive Surgical Treatment of Visual Field Obstruction Due to Brow Ptosis: A Treatment Algorithm


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Disclosures

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Introduction

- **Brow ptosis** is a common aesthetic complaint which can also contribute to significant visual field obstruction\(^1,2\).

- To our knowledge, there is no currently published algorithm for the surgical treatment of brow ptosis causing visual field obstruction.
Purpose

- Based on review of the literature to date and institutional experience, the authors sought to develop a surgical treatment algorithm for **brow ptosis** that addresses associated **visual field obstruction** while yielding an **aesthetic result**.
Methods

- A review of the literature was performed.

- Inclusion criteria included:
  - >21 years of age
  - presence of brow ptosis
  - description of the surgical technique(s) used
  - outcome data was reported
  - complete article text available in English
Methods

- Exclusion criteria included:
  - pediatric or congenital ptosis
  - preoperative facial paralysis (unilateral or bilateral)
  - revisionary or secondary brow lift procedures
  - complete article text was unavailable or not in English.
Results

- The initial literature search yielded 174 articles.
- There were 29 articles that met the inclusion and exclusion criteria.
Results

- A wide spectrum of reported techniques and outcome data exist.
- Thus, few findings were directly comparable, but they did prove useful in overall treatment guidance.
Results

• The outcomes reported in the reviewed publications were combined with our institution’s experience to construct a comprehensive surgical treatment algorithm (Figures 1 and 2).
Institutional criteria for brow lift (BL) are met:
1. Brow ptosis present
2. Appropriate documentation indicating visual obstruction will likely be improved with BL (i.e. specialty consults, visual field testing, etc.)

**Skin excess < 1.5 cm**
- Brow repositioning and fixation technique
  - Assess individual patient risk and determine appropriate anesthesia
    - General
      - Forehead wrinkles are suitable for camouflaging transverse forehead incision
        - Yes
          - Endoscopic
            - Transpalpebral
            - Intraciliary
        - No
          - Midforehead (Direct transverse)
          - Supraciliary
          - Large skin flap removal technique (See Figure 2)
    - Local and/or MAC
      - No temporal extension to procedure
      - No
        - No temporal extension

**Skin excess ≥ 1.5 cm**
- Skin removal technique
  - Assess individual patient risk and determine appropriate anesthesia
    - General
      - Forehead wrinkles are suitable for camouflaging transverse forehead incision
        - Yes
          - Endoscopic
            - Transpalpebral
            - Intraciliary
        - No
          - Midforehead (Direct transverse)
          - Supraciliary
          - Large skin flap removal technique (See Figure 2)
    - Local and/or MAC
      - No temporal extension to procedure
      - No
        - No temporal extension

*If dermatochalasis also contributes to visual field obstruction, this can be addressed with the addition of a blepharoplasty to any of the brow lift techniques in this algorithm.*
Large skin flap removal technique

Patient is a candidate for and accepts coronal incision

The vascularity of the tissue flaps is questionable

Yes

Coronal subgaleal or subperiosteal flap dissection technique

No

Pretrichial subcutaneous flap dissection technique

No

Pretrichial subgaleal or subperiosteal flap dissection technique

*If dermatochalasis also contributes to visual field obstruction, this can be addressed with the addition of a blepharoplasty to any of the brow lift techniques in this algorithm.
Conclusion

- Utilizing available literature on brow ptosis and our institution’s experience, the authors describe a comprehensive treatment algorithm that effectively addresses the functional and aesthetic issues of visual obstruction due to brow ptosis.
References
