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Review

Postoperative temporal hollowing: Is there a surgical approach that prevents this complication? A systematic review and anatomic illustration[☆]



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Summary *Background:* Temporal hollowing is a common complication following surgical dissection in the temporal region. Our objectives were to: (1) review and clarify the temporal soft tissue relationships – supplemented by cadaveric dissection – to better understand surgical approach variations and elucidate potential etiologies of postoperative hollowing; (2) identify if there is any evidence to support a surgical approach that prevents hollowing through a systematic review.

Methods: Cadaveric dissection was performed on six hemi-heads. A systematic review of the literature was undertaken to identify surgical approaches with a decreased risk of postoperative hollowing.

Results: A total of 1212 articles were reviewed; 19 of these met final inclusion criteria. Level I and II evidence supports against the use of a dissection plane beneath the superficial layer of the deep temporal fascia or through the intermediate temporal fat pad. Level II evidence supports preservation of the temporalis muscle origin – no evidence is available to support other temporalis resuspension techniques. For intracranial exposure, refraining from temporal fat pad dissection (Level I Evidence) and use of decreased access approaches such as the minipterional craniotomy (Level I Evidence) appear to minimize temporal soft tissue atrophy.

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