Temporal region

see Mediobasal temporal region.

see Temporal lobe.

Contour irregularities in the temporal region have been reported previously after procedures involving temporal dissection.

In a study, Krug et al. reported paradoxical temporal enlargement (PTE) following interfascial pterional craniotomy.

A retrospective review of patients who underwent a unilateral transcranial procedure with a frontotemporal approach between September 2013 and December 2017 was performed. Patients with a previous craniotomy or bilateral craniotomy were excluded. Radiological imaging series including computed tomography and magnetic resonance imaging were utilized to calculate temporal soft tissue volumes both preoperatively and postoperatively by using advanced software technology. Relative soft tissue volume differences between the operative side and the contralateral side were calculated at different time-points including preoperative, 3-months follow-up (3M), 12-months (12M) follow-up, and the last follow-up (LFU, over 1-year).

Forty-three patients were included. Mean age was 52.7 ± 4.5 years. Mean follow-up was 27.9 ± 15.8 months. Significant changes of temporal fat pad relative-volume difference were observed between the preoperative and the corresponding 3M ($t [82] = -2.8865$, $P = 0.0050$); 12M ($t [77] = -4.4321$, $P < 0.0001$), and LFU ($t [74] = -4.9862$, $P < 0.0001$) postoperative time points. No significant change of the temporal muscle was observed between the preoperative and the corresponding 3M ($P = 0.3629$), 12M ($P = 0.1553$), or LFU ($P = 0.0715$). Soft tissue volume showed a significant increase on the operative side between the preoperative and the corresponding LFU ($t [74] = -2.5866$, $P = 0.0117$).

Paradoxical temporal enlargement with more than 10% volumetric change was observed in 24% of the patients at their LFU (>1-year). This change was not due to temporalis muscle changes. Paradoxical temporal enlargement was due to hypertrophy of the superficial temporal fat pad. Before surgical correction of postoperative temporal contour changes, it is important to obtain imaging and characterize the etiology of the deformity [1].

1)
Krug RG 2nd, Kuruoglu D, Yan M, Van Gompel JJ, Morris JM, Kamath MJ, Graffeo CS, Sharaf B. Paradoxical Temporal Enlargement: An Expansion of Superficial Temporal Fat Pad Following Interfacial Technique for Pterional Craniotomy. J Craniofac Surg. 2021 Jun 28. doi: 10.1097/SCS.0000000000007730. Epub ahead of print. PMID: 34183631.