

Superficial temporal artery among Kenyans: pattern of branching and its relation to pericranial structures.

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Abstract:

The superficial temporal artery, one of the terminal branches of the external carotid artery, is used for temporoparietal, parieto-occipital flaps and forehead flaps in reconstructive surgery. The topographic anatomy of this artery exhibits ethnic variations. Therefore, this study aimed to determine the branching pattern of the superficial temporal artery and its relation to specified landmarks in the pericranial region among Kenyans. Sixty superficial temporal arteries from thirty adult cadavers (18 male, 12 female), obtained from the Department of Human Anatomy, were examined during dissection. The number of branches and pattern of branching of the superficial temporal artery was recorded. Specific measurements were taken from the branching point to the lateral canthus, tragus, and midpoint of the arch of the zygoma. Classical bifurcation into a parietal and a frontal branch was seen in 16 (53.3%) cases. Double frontal and double parietal branches were reported in 26.7% and 13.3% of cases, respectively. Only two cases had a trifurcation. The point of origin of the branches in most cases (80%) was above the arch of the zygoma. The mean distance to the midpoint of the arch of the zygoma was 50.8 + or - 20.9 mm, to the lateral canthus 58.6 + or - 24.3 mm, and to the tragus 44.1 + or - 18.5 mm. The branching pattern among Kenyans, therefore, differs from the classical descriptions. A good understanding of the forehead vascularity aids in the design of flaps and minimizes postoperative complications