

**Keywords:** Sihler's staining, Intramuscular innervation, Intrinsic hand muscles

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## Cadaver Study on the Adequacy of the Antero-Lateral Thigh Free Flap in Facial Reconstruction after Radical Parotidectomy

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**Purpose:** Radical parotidectomy may cause important functional facial defects because of the severed facial nerve branches, such as inability to close the eye, lack of oral competence and lack of facial expression, and aesthetic defects secondary to the volume defect of the removed soft tissues. The use of the antero-lateral thigh free flap with vastus lateralis nerve graft is being proposed as the optimal reconstruction method to cover the volume defect caused by parotidectomy and its vastus lateralis motor nerve graft for facial nerve reconstruction. Thus, the anatomic features of the flap are vital to a successful reconstruction of the severed area.

**Methods:** The study was performed on 6 cadavers. We have used a preauricular approach to the parotid gland. The skin flap was raised, which allowed visualization of the SMAS and its dissection. An antegrade approach to the facial nerve was performed, which allows the identification of the trunk of the facial nerve, and its different branches. The anterolateral thigh flap was raised, and the type and distribution of its perforator vessels, the dominant vascular pedicle, and the relationship with the vastus lateralis nerve were studied. An analysis was performed on the number of branches and its diameters, and its relationships with the muscle.

**Results:** The distribution of the branches of the facial nerve, its number, its diameter and the relationship with the facial musculoaponeurotic system are analysed. The results indicate that an accurate analysis of the crural branches innervating the vastus lateralis and its pedicle meet the conditions for obtaining an anterolateral thigh free flap with nerve graft.

**Conclusion:** The anterolateral thigh free flap can be optimal for facial reconstruction after radical parotidectomy.

**Keywords:** Facial paralysis, Radical parotidectomy, Antero-

lateral-thigh free flap, Vastus lateralis nerve graft

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## The Influence of Ramus Intermedius an Aberrant Coronary Branch on Left Coronary Artery Atherosclerosis Amongst Low-Risk Individuals

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**Purpose:** This study aims to elucidate the potential contributory effect of ramus intermedius (RI) as an aberrant vessel at the left bifurcation region (LBR) forming a plaque deposition at the left coronary artery (LCA).

**Methods:** A retrospective cross-sectional single-centre study was conducted among patients who underwent cardiac computed tomography angiography from January 2017 to December 2018. Of 438 patients, 139 patients with low cardiovascular risk were included in this study. The plaque deposition in the left main coronary, left anterior descending (i.e., proximal (pLAD), middle (mLAD), and distal (dLAD)) and left circumflex (i.e., proximal (pLCx), middle (mLCx), and distal (dLCx)), and RI arteries were identified and analysed. Descriptive statistics, Chi-square, and binary logistic regression tests were used in this analysis between patients with and without RI with plaque deposition at the LCA. A p-value < 0.05 was considered statistically significant.

**Results:** There were 33.8% (n = 47) of patients who had RI. The single RI vessel was more common (n = 42) than the double RI (n = 5). Generally, the pattern for plaque burden was found higher in pLAD (37%) followed by mLAD (28.8%), pLCx (22.5%), and LMCA (19%). The presence of RI doubled the risk for plaque deposition at these arteries compared to those patients without RI when analysed using multivariate analysis. Besides the LCA, the RI was also found at risk for plaque deposition (30%, n = 14).

**Conclusion:** The RI increases the risk for atherosclerosis plaque deposition at the left coronary, especially those closest to the LBR.

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