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Types of extracranial branching of the facial nerve

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Abstract

Background: Interest in anatomical variability and individual specific features of the extracranial branches of the facial nerve, taking into consideration that nowadays, people are so concerned about their physical look, the knowledge of facial nerve peripheral branching is of high clinical significance. Even, if it is hardly difficult do discover something new, or unusual at the macromicroscopic level, we believe that reading this paper oncologists and oromaxillofacial surgeons will be surprised by anatomical variations of the peripheral braches of the facial nerve.
Material and methods: Our research project was carried out on 52 cadaveric semiheads that previously were fixed in 10% formalin solution: 36 male and 16 female; 25 of those samples were right and 27 left side semiheads. The bilateral pattern of dissection was carried out on 30 semiheads and unilateral dissection – on 22 semiheads. The dissected samples were photographed. Some samples were marked out with black papers for better contrast.
Results: The facial trunk on its exit from the sylomastoid foramen was descendent in 32 cases (61.54%), in 9 cases (17.3%) it ran horizontally and in 5 cases (9.62%) it had an ascending course, but in 6 cases (11.54%) the branches derived directly from the trunk in a fan-like fashion. According to the known classification of the facial nerve peripheral branching, the following percentage for each type was established: Type I (23.1%); Type II (7.7%); Type III (1.9%); Type IV (38.5%); Type V (7.7%); Type VI (9.7%). Few intermediate types have been marked out such as: Type II-III (3.8%); Type III-IV (3.8%), Type V-VI (3.8%). When dissecting the facial nerve we observed that the trunk in 37 cases divided into two primary braches and in 15 cases there were marked out diffuse types of branching.
Conclusions: A significant characteristics of the facial nerve is its variability and individual specific features. Among the well known classified types of peripheral branching of the facial nerve, there are intermediate types of its extracranial divisions.

Key words: facial nerve, trunk, landmarks, variability.