

### **367. TEMPORAL BONE ANCHORED AURICULAR PROSTHESIS. TOPOGRAPHICAL, EXPERIMENTAL STUDY**

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**Introduction.** Rehabilitation of maxillofacial defects regardless of etiology, location, size or age is an important, complex and difficult compartment of oro-maxillo-facial surgery. With the presence of the tissue defect, there is a psychological trauma of the patient, after which the quality of life decreases, appears the difficulty of social integration and the presence of psychological inhibitions due to the aesthetic or functional defect.

**Aim of the study.** Experimental verification of the possibility of rehabilitation of patients with anotia of different genesis by means of ectoprosthesis anchored on extraoral implants.

**Materials and methods..** The study group comprises 161 patients who addressed themselves within "Otolaryngology Department" of the State University of Medicine and Pharmacy "Nicolae Testemitanu" in the period 2015-2017. In the study, there was performed the three-dimensional analysis of the bone supply and the densitometric analysis of 14 computed tomography of various patients without anotia. In order to continue the experimental study, we proceeded to the surgical part by inserting two implants in the temporal bone on prepared cadaveric. Then we made the surgery on a real patient with post-traumatic anotia.

**Results.** Statistical analysis of the clinical data of the patients, showed that 4 patients from 161 patients had an anotia. Statistical studies on the anotia in the Republic of Moldova do not exist, but the result of the own study obtained, relatively corresponds to the frequency data reported in the literature from other countries. The maximum value of temporal bone supply obtained from the dimensional point of view was 8.21 mm, and the minimum value 1.01 mm in the region of the supramastoid crest and the upper part of the mastoid apophysis. In the densitometry analysis we obtained the maximum value of 1413 pHU (pseudo-Hounsfield units) and the minimum value of 46 pHU. The mean dimensional value of the patients investigated paraclinically is 4.30 mm. The average bone density is 659.85 pHU. We made a surgery of inserting 2 implants in the temporal bone on prepared cadaveric then on a real patient with anotia.

**Conclusions.** There are areas of major importance, which must be known and avoided in the planning process. We have located the appropriate implant insertion areas to obtain sufficient primary stability and their osseointegration. The paraclinical examination is mandatory in the process of planning and establishing the bone supply and the relation of future implants with the neighboring anatomical elements. By conducting the experimental study on prepared cadaveric, we have shown that, the mastoid apophysis and the upper mastoid crest represent favorable areas for the insertion of extraoral implants. We successfully performed the surgical stage of the rehabilitation process of a patient with post-traumatic anotia.

**Key words:** anotia, auricular ectoprosthesis, extraoral implants, temporal bone