

REPAIR OF PALATINE BONE AND MAXILLA AFTER COVID-19 COMPLICATIONS

Narmuratov B.Q., Ruziyeva S.S.

Tashkent state medical university

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Introduction

During the COVID-19 pandemic, a significant number of mucormycosis cases were recorded, many of which required surgical intervention. To prevent death, parts of the maxillofacial region, such as the alveolar process of the upper jaw, the palate, the contents of the eye socket, and the nasal cavity, were often removed. In two age groups - 16-32 and 43-70, an increase in the number of previously undiagnosed and progressive defects of the maxillofacial region was observed. At the TMA clinic, the total number of treated patients increased by 61.36%, while the number of primary cases increased by 83.85%. In addition, patients who underwent rehabilitation at the Tashkent state medical university clinic revealed changes in the structure of the maxillofacial region: the number of cases with inflammatory processes (such as phlegmon and abscess) increased by 2.4 times, the number of cases of necrosis of the contents of the eye socket and palate increased by 2.56 times, and the number of cases of facial tissue necrosis increased by 1.2 times.

Purpose

The purpose of this study is to study the prosthetics of the palatine bone and maxilla in cases of necrosis caused by COVID-19 complications using an innovative approach using acrylic prostheses.

Materials and methods

The study was conducted on 12 patients at the multidisciplinary clinic of the Tashkent Medical Academy, Department of Maxillofacial Surgery. Acrylic dentures with a palatal obturator were used in 8 patients, and a titanium framework

was used in 4 patients. Acrylic prostheses were made from polymethyl methacrylate (PMMA) using the ProBase Cold/ProBase Hot system (Ivoclar Vivadent, Switzerland). The titanium frame (titanium grid/frame) was custom-made based on a 3D jaw model (CAD/CAM technology).

Results

Out of 12 patients, 10 (83.33%) showed significant improvement in speech, swallowing, chewing, and aesthetics ($p \leq 0.17$). However, 2 patients (16.67%) had allergic reactions to acrylic material containing methyl methacrylate (MMA), as well as Ponseau 4R (E124) dye and additives.

Conclusion

Currently, modern types of acrylic dentures and dyes have been developed that either do not cause allergic reactions or cause significantly fewer reactions. Due to the high cost of autotransplantation, most patients cannot afford such procedures. In these circumstances, the use of acrylic prostheses is the most optimal solution for the restoration of the palatal bone and maxilla after complications caused by COVID-19.

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