

**ASSESSMENT OF THE EFFICIENCY OF ORTHOPEDIC
CONSTRUCTION IN TREATING JAW BONE DEFECTS RESULTING
FROM POST-COVID 19 COMPLICATIONS**

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The COVID 19 pandemic has not only affected the respiratory system but also had adverse impacts on other anatomical and functional structures. Specifically, complications like hypoxia, impaired circulation, and inflammatory processes following the infection can cause severe injuries and defects in jaw bones. Jaw bone defects result not only in cosmetic issues but also in significant impairments in eating, speech, and overall quality of life. Addressing this problem necessitates the use of individualized orthopedic constructions. For this reason, the topic of this study is considered highly relevant.

INTRODUCTION. Materials and Methods: 1. Study Object: 50 patients with jaw bone defects caused by post-COVID 19 complications.

2. Diagnostic Methods:

3D-computer tomography,

Radiological examinations,

Biomechanical analysis.

3. Orthopedic Rehabilitation: Modeling of individualized prostheses using CAD/CAM technology and manufacturing them with 3D printers.

4. Analysis Methods:

Evaluating pain levels using the VAS (Visual Analog Scale),

Measuring the tensile strength and pressure resistance of the applied constructions,

Assessing the recovery of speech and eating functions through surveys and physician evaluations.

Results

1. Among patients who received orthopedic constructions, a 75% reduction in pain levels was observed within three months.
2. Speech and eating functions were restored in 85% of cases.
3. The applied CAD/CAM technology demonstrated that constructions manufactured using 3D printers had a biomechanical efficiency of over 90%.
4. Overall patient satisfaction reached 92%.

Conclusion

Jaw bone defects resulting from post-COVID 19 complications can be effectively rehabilitated through individualized orthopedic constructions. Modern CAD/CAM technologies and 3D printers enhance the precision and quality of surgical and rehabilitation processes. Widespread application of these methods can restore patients' quality of life and social activity.

