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ABSTRACTS

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Oral Presentation

NEW STRATEGY OF ORBITAL RECONSTRUCTION,
BASED ON CAD/CAM TECHNOLOGIES

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The recent developments of CAD/CAM technologies and evidence of their effective clinical application in management of facial bone defects and deformities cause an increased interest to their usage in reconstructive surgery of the orbit.

Purpose

The aim of this study was to evaluate the efficacy of patient specific implants at patients with post-traumatic orbital defects and deformities.

Material and methods

31 patient with posttraumatic orbital defects and deformities with subsequent reconstructive procedures using patient specific implants were included to the study. All patients were examined according to the standardized algorithm including local status examination, vision assessment and computer tomography before and after surgery. Implants positioning and its conformity with preoperative planning, as well as their clinical efficacy were evaluated.

Results

In all the patients no postoperative inflammatory complications, decreased visual acuity or loss of visual fields were found. The average period of implant design and manufacturing was 5.9 ± 2.5 days. The average duration of the surgical interventions was 54.1 ± 11.5 minutes. Elimination of functional disorders 1 month later surgical intervention was observed in 65.2% of cases, followed by 86.96% in 3 month term. Positive aesthetic results were obtained in 95.7% of patients.

Conclusion

Orbital reconstruction using patient specific implants is an effective procedure that allows to restore the complex anatomy of the orbit and to improve the functional outcomes in patients with post-traumatic orbital defects and deformities.