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3D Technology applied in the rehabilitation of patients with loss of ocular globe**Marcela Felizzola Cristancho**

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Objective: To demonstrate the effectiveness of 3D technology in the ocular rehabilitation of patients with total or partial loss of the eyeball.

Material and Methods: A unicentric prospective clinical trial was performed, with patients with total and partial loss of the ocular globe. In total there were 8 cavities studied, during a period of 15 months. These patients were evaluated with the Proofel protocol and adapted with ocular prostheses made based on the topographic interpretation of the cavity (visualization technique and wax modeling of previous models), taking quantitative measurements, evaluation of the three adaptation criteria: Mobility, symmetry and aesthetics and parameterization of the final devices.

Once the patients were adapted, the information gathering stage for the three-dimensional reconstruction of the cavities under study began, with the use of a high-tech scanner capable

of capturing complex geometries, sharp edges, thin slits and with a resolution of up to 0.1 mm, the necessary images were captured and then exported by means of files to a 3D design computer program where computer aided design was made, which was later printed by computer-aided manufacture, this impression becoming the model of the prosthesis future for each patient.

The parameters of the devices in use and those obtained by 3D printing were analyzed, complemented by a survey that allowed comparing the two techniques from the patients.

Results: Safe technology for the health of patients, objective, reliable, comfortable, zero contact, with a minimum exposure time to collect accurate information about the cavity, for use in all types of patients with total or partial loss of the balloon ocular.

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