Application of the spherical orbital hydroxyapatite implants for evisceration of the eyeball after mine-explosive injuries and complications.

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Introduction: one of the most promising areas of health care in military conditions is the improvement of restorative treatment of patients in order to return them to society as soon as possible. Thus, the problem of cosmetic eye prosthetics is important, and its successful solution contributes to the social and professional rehabilitation of patients who lost their eyeball.

According to the literature, evisceration and enucleation of the eyeball after a penetrating injury is performed in 11.6-27.0% of patients in normal times, the frequency of such interventions increases in wartime. Loss of the organ of vision leads not only to functional disorders, but also to changes in the psycho-emotional status of patients.

At present, military trauma and, in particular, the consequences of mine-explosive damage to the eye, are of particular relevance, where it is often not possible to determine the presence of post-traumatic changes in the tissues of the orbit, which may affect the behavior of the orbital implant. At the same time, the ophthalmic surgeon may face the problem of optimal choice not only of the implant, but also of the method and timing of implantation, and peacetime experience may not be enough to solve this problem.

Purpose: the optimization of ocular globe prosthetics (OGP) formation during evisceration after mine-explosive wounds using hydroxyapatite orbital implants.

Material and methods: the clinical part of the work is devoted to the study of the immediate and remote (up to 6 months) results of OGP formation in 44 patients after mine-explosive injury during evisceration with the use of hydroxyapatite implants.

The state of the surface of the upper eyelid was evaluated subjectively, distinguishing between small, moderate and sharply pronounced deepening of the palpebra-orbital fold. The position of the front surface

of the cornea of the healthy eye and the front surface of the prosthesis was objectively assessed during mirror exophthalmometry using a Hertel exophthalmometer. Functional efficiency was determined by the degree of mobility of the prosthesis, which is measured in Hirschberg degrees.

When comparing paired samples, the Wilcoxon T-test, a non-parametric analogue of the paired Student's t-test, was used.

As an estimate of the average tendency of the sample, the average value ( ) and boundaries of the 95% confidence interval (+t0,05S) were given in the tables.

Results and conclusions: in the immediate and long-term follow-up, 41 patients had no pronounced deepening of the palpebra-orbital fold. In 3 patients after 6 months there was a pronounced deepening of the palpebra-orbital fold. During observation, in all cases, there were no deformations and narrowing of the eye slit, in all patients, in the early stages, the exophthalmos of the prosthesis remained from 1 to 4 mm. After 6 months, there was no exophthalmos prosthesis. There were no implant rejections during the observation period.

When evaluating the effectiveness of OGP formation during evisceration, it can be seen that the mobility of the prosthesis in the four meridians is (138.75±16.0)0, 45.75 degrees more than without OGP formation (93.0±9,2)0. There was also symmetry in the position of the prosthesis relative to the healthy eye. After 3 months, there was an increase in the movement volume of the prosthesis by 4-60 in the sum of four meridians to (143.2±15.1)0. After 6 months, the mobility indicators of the prosthesis remained stable.

In the immediate and long-term follow-up, 38 patients had no pronounced deepening of the palpebra-orbital fold. Only 6 patients had pronounced deepening of the palpebra-orbital fold after 3 months. During observation, in all cases, there were no deformations and narrowing of the eye slit, in all patients, in the early stages, the exophthalmos of the prosthesis remained from 1 to 4 mm. After 6 months, in half of the cases there was exophthalmos of the prosthesis up to 1 mm, in the other half - enophthalmos of the prosthesis up to 1 mm.

There were 3 implant rejections during the observation period. In these 3 cases, after a rather short period of time - 2-3 weeks after the operation, the implant rejection began in the form of it pushing out of

the scleral cavity.

Examination of the scleral sac and orbital tissues in all cases revealed changes that were of the same type, apart from some minor pathomorphological details.

The nature of pathological changes in these 3 studied cases of implant rejection can be assessed as chronic productive nonspecific inflammation of the granulomatous type, backgrounding of the fungal mycelium elements. At the same time, it is necessary to emphasize the absence in all cases of signs of acute inflammation, so, the rejection is in no way related to the sterility of the implant material or the subsequent addition of a bacterial infection.

Based on the clinical, microbiological and pathomorphological studies, the cause of the inflammatory process in the tissues of the orbit is not the material used for the implant. In our opinion, the short period of time after the injury, the presence of foreign bodies in the tissues of the orbit (metal, plastic, glass, soil areas, etc.), fungal infection in the form of mycelium in the tissues of the orbit, which led to the inflammatory process and the implant extrusion, should be considered the cause of postoperative complications.

Thus, it is necessary to pay attention to a more careful approach in solving the question of the use of orbital implants after evisceration after mine-explosive injuries. In our opinion, delayed use of implants after an injury is advisable. If evisceration is urgently required for mine-explosive injuries, it is recommended to perform it without the use of implants, and to carry out secondary implantation after a certain time.

Ефективність лазерного органозберігаючого лікування новоутворень райдужної оболонки та іридоциліарної зони

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Вступ. Ефективність лазерної коагуляції пухлин іридоциліарної зони та їх ускладнень досягається за рахунок відмінності в розподілі по глибині енергії, що поглинається в залежності від використаної довжини хвилі.