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RESULTS OF TREATMENT OF MUCOROMYCOSIS IN PATIENTS WITH DIABETES MELLITUS

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ANNOTATION: In the article, the author shows the experience of treatment with mucormycosis in patients with diabetes mellitus. The work is based on the results of complex treatment of 234 patients with rhinocerebral mucoromycosis who were treated in the department of ENT and CHLC of the MMC of the Andijan region from 2020 to 2024, aged from 19 to 87 years.As a result, 15 (6.4%) of 234 patients had a fatal outcome. Wound suppuration was noted in 20 (9.1%) of 219 patients and suture discrepancies were noted in 5 (2.3%). In the long-term period from 3 months to 2 years, 61 (27.8%) patients had good results, 132 (60.3%) had satisfactory results and 26 (11.9%) had unsatisfactory results.

Keywords: Mucoromycosis, diabetes mellitus, Covid-19, treatment results, good results.

The relevance of the problem. Almost all patients with mucoromycosis previously described in the literature suffered from diabetes mellitus and in typical cases were in a state of ketoacidosis. This is due to the fact that Rhisopus fungi need free iron for their development [4, 5], and acidosis, disrupting the ability of transferrin to bind iron, leads to an increase in the level of free iron in blood plasma. In addition, models of human macrophages and polymorphonuclear leukocytes have shown that they are able to prevent the development of fungal infection, in particular the growth of spores. However, in conditions of ketoacidosis, these qualities are suppressed, which leads to unrestrained reproduction of spores [2].

The initiating moment in the development of mucoro mycosis is inhalation or ingestion of spores, but the contact route of their penetration through a contaminated dressing is also described. There are rhinocerebral, pulmonary, cutaneous, gastrointestinal and disseminated forms of the disease [5]. In diabetes mellitus, rhinocerebral mucoromycosis occurs most often (in 80% of cases) [5].

Rhinocerebral mucoromycosis was first described 57 years ago. The entrance gate for fungi is the nasopharynx. The invasion of the fungus is accompanied by damage to the nose and nearby tissues [5]. Characteristic symptoms are headache and pain in the face, lethargy, which develop against the background of pronounced decom-pensation of diabetes mellitus with ketoacic dose phenomena. After correction of metabolic disorders, symptoms may persist if specific treatment is not performed [5, 6].

Headache and or pain in the face area indicate the spread of the process to the area of the paranasal sinuses and orbits of the eyes. The deterioration of the latter can be manifested by protrusion of the eyeballs and decreased vision. On examination, bloody discharge from the nose, cellulite, and characteristic black scabs on the palate are visible (a manifestation of hemorrhagic necrosis caused by the invasion of microorganisms into blood vessels, their occlusion, and the development of arteritis).

The aim of the study is to improve the results of treatment of mucoromycosis through early diagnosis and the development of a new method of surgical treatment.

Materials and methods: The work is based on the results of complex treatment of 234 patients with rhinocerebral mucoromycosis who were treated in the department of ENT and CHLC of the MMC of the Andijan region from 2020 to 2024, aged 19 to 87 years. Of these, 83 (35.4%) were male and 151 (64.6%) were female. The main affected areas were the upper jaw of the facial sclera (226 patients (96.6%)). Patients were admitted to the department at various times (from 1 to 10 days) after the detection of cerebral symptoms, as well as necrosis of the mucous membrane of the palate. Patients underwent conservative treatment before and after surgical interventions in order to improve vascular microcirculation and antifungal therapy, as well as symptomatic.

Results and discussions. Along with traditional methods of surgical treatment, new methods of operations were used to hide a purulent inflammatory focus. The choice of surgery depended on the area and location, as well as the condition of unaffected adjacent tissues.

The technique of the operation is. The operation was performed under local or general anesthesia according to the patient's condition. To hide the purulent-inflammatory focus, the incision is made by oral access. There is a transitional fold along the line between the 2nd and 6th teeth. In a sharp and blunt way, the bone of the upper jaw exfoliates to the infraorbital opening. Upon visual examination, the canine fossa of the upper jaw is a degenerative change, as well as osteonecrosis of the bone is determined. On the side of the nasal entrance, the mucous membrane of the nasal passage is subatrophied or necrotized. In such cases, an ENT doctor is invited to the operating room and surgery is performed jointly. It penetrates into the maxillary sinus through the dog's fossa. When examined in the maxillary sinus, the necrotized mucous membrane of the maxillary sinus as well as calcinate after the death of the rodents is completely sledged, the cavity is perforated through this hole, the bottom of the eye socket is perforated, accumulated liquid is released through these holes and exophthalmos retreats can be seen. Next, the lateral wall of the maxillary sinus is perforated through these holes, the mucous membrane of the nasal passage is peeled off to the medullary bone. The lattice bone is completely accumulated with the help of a surgical spoon. Revision. Hemostasis. Cleansing the cavity. The mouth through the natural course of the nose.

Physiological and morphological studies were carried out. The state of microcirculation in the affected tissues in 134 patients before and after surgery was studied using percutaneous determination of oxygen tension in tissues (RtcO2). For this purpose, we used the single-contact sensor TSM-3/20/200 system from Radiometr, Denmark.

Biopsies for microscopy were taken to study morphological changes in the affected tissue area. The preparations, after fixation in a 2.5% solution of glutaraldehyde on a phosphate buffer, were dehydrated in alcohol-acetone, then dried by the critical point method. They were photographed using a Canon digital camera from the monitor screen of a Hitachi S-405 microscope.

In the area of the unaffected area of the face before surgery, the average oxygen voltage was 111.05.8 mmHg. And in the tissues of the affected areas decreased to a critical level, reaching 16.2±0.3 mmHg.cm. After surgery, the first day the level of PtsO2 rose to 108.15.6 mmHg., This was an indication for viability fabrics. After plastic surgery, 3 days later, the level of PtsO2 stabilized to 105.95.2 mmHg..

Morphological studies have shown that osteonecrosis with fungal etiologies is detected in the biopsy, A.nigger 196 is possible, which was 83.8%, A.parasitis 16 (6.8%), A.flavis and the rest. Electron microscopy can show violations of the general architectonics of bone structures. In the

epidermis of the mucous membrane, integrity violations are determined in the form of tears, cracks, as well as violations of the spiny layer and acantholysis and cytolysis are noted.

Results. In the postoperative period, 15 (6.4%) of 234 patients had a fatal outcome after the 3rd day of surgical treatment. This is due to cardiological pathologies.

Wound suppuration was noted in 20 (9.1%) of 219 patients. In such cases, the temporary stitches were removed and the wound healed a second time. In 5 (2.3%), suture discrepancies were noted due to a lack of plastic material to close the palate defect. In such cases, after 3 months, surgical intervention was repeated to close the defect. The wound healed initially.

In the long-term period from 3 months to 2 years, 61 (27.8%) patients had good results, 132 (60.3%) had satisfactory results and 26 (11.9%) had unsatisfactory results.

Conclusion: early diagnosis using MSCT makes it possible to identify the affected areas of the rhinocerebral type. Additional research methods such as mycology to identify antifungal antibiotics provide high efficacy for the treatment of mucoromycosis.

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