The irradiation of the tumor became smaller in size, dulled the pain, but it was later discovered side effects of radiation on normal cells, and its application in medicine has declined. Later developed less traumatic scheme radiation application, radiation therapy, and has become an integral part of cancer treatment. Under radiotherapy understood effects on cancer cells to ionizing radiation. The clinics use ordinary X-rays are very high energy or electron beams. Prophylactic radiotherapy is used to prevent metastasis of cancer cells. The urgency of the problem of oral tissues adapt to orthopedic prostheses, and remains to this day. Based on their observations, Gysi in 1900 noted that in 40 years of practice in prosthetic dentistry treatment he has carried out a complete denture for more than 20 thousand people, of which 25% is fully adapted, 25% - Not adapted, and 50% - with violation of the processes of adaptation. Currently, there is a group of patients with features of prosthetic adaptation after radiation therapy of oncological pathology of the maxillofacial region. Focusing on the results of the effectiveness of radiotherapy oncologists say the trend growth in the number of patients in need of rehabilitation activities. The data are prosthetic dentistry, for example, removable orthopedic design.

**Keywords: dentistry, research, adaptation**

In 1895 g. X-rays have been opened, after which they were used in medicine, namely in the treatment of tumors. The irradiation of the tumor became smaller in size, dulled the pain, but it was later discovered side effects of radiation on normal cells, and its application in medicine has declined. Later developed less traumatic scheme radiation application, radiation therapy, and has become an integral part of cancer treatment. Under radiotherapy understood effects on cancer cells to ionizing radiation. The clinics use ordinary X-rays are very high energy or electron beams. Prophylactic radiotherapy is used to prevent metastasis of cancer cells. For example, prophylactic cranial irradiation is used in cases where the primary cancer is a high risk of spreading to the brain. Palliative radiation therapy is used to relieve the patient's condition (e.g., pain relief and reduction in tumor size).

The urgency of the problem of oral tissues adapt to orthopedic prostheses, and remains to this day. Based on their observations, Gysi in 1900 noted that in 40 years of practice in prosthetic dentistry treatment he has carried out a complete denture for more than 20 thousand people, of which 25% is fully adapted, 25% - Not adapted, and 50% - with violation of the processes of adaptation. Currently, there is a group of patients with features of prosthetic adaptation after radiation therapy of oncological pathology of the maxillofacial region.

Focusing on the results of the effectiveness of radiotherapy oncologists say the trend growth in the number of patients in need of rehabilitation activities. The data are prosthetic dentistry, for example, removable orthopedic design [7, 8], and the adaptation here is quite narrow meaning -
patient getting used to dentures. This addictive (or "device") to dentures occurs when the elimination of pain, when it was mental, motor and phonetic adaptation [3, 4].

You also need to say that, according to ZS Vasilenko (1977, 1980), Jacob K. (1977), MK Dragobetskogo (1985) and the other 22-28% of patients do not wear dentures, and 36% have to adapt to the low-quality prostheses. In 52% of cases prosthetic dentures these constructs are unstable during chewing, while 64.7% of patients develop a prosthetic bases mucosal disease [1, 2].

Determining factors contributing to the process of adaptation to a dental prosthesis, which are cortical in nature, are the type of higher nervous activity and plasticity of the nervous centers of the patient [3].

The purpose of research - to study the effectiveness of orthopedic rehabilitation of patients who have undergone radiation therapy, according to local adaptation reactions to the structures of polyurethane and acrylic plastics.

Methods and materials

The study included 23 patients with defects in the maxillofacial region, treated with radiation therapy, which are in need of orthopedic rehabilitation, using a variety of removable structures. 11 patients were made prosthesis of polyurethane with an elastic gasket 12 - acrylic plastics. Within 4 months of inspections carried out and the patients assessed the process of adapting the use of the prosthesis.

To solve the problems we have developed a method to assess adaptation dental orthopedic structures, including an assessment of the patient's level of adaptation on a scale of five categorical features a dentist-orthopedist protocol dynamic assessment of the patient's adaptation [8].

Results and discussion of research

The study of adaptation indicators conducted according to the protocol of dynamic evaluation of the patient to adapt to an orthopedic prosthesis .

Conducts surveys every patient and calculating the amount of points received and integrated index level of adaptation to the prosthesis, and the assessment of the patient's level of adaptation carried out according to four levels of categorical attributes, and as an integrated index is used to adapt the index, which is calculated by a formula using the rule sigma deviations R. Gottsdankera (1982) to the average level of adaptation.

Persons with a score above 1.5 points are allocated to a group with fairly definite sign of violations of adaptation. The subjects with a score below 0.5 points included in the group with an optimal course of the adaptation process. Adaptation should be considered to have existed where $IAOK \leq 0.1$ points.
It is established that patients with dentures polyurethane score is minimal in comparison with the group of patients with prosthetic acrylic plastic, which reflects the best adaptation to the structures of the polyurethane.

Conclusion

The study established that the clinical signs of local adaptations to structures of polyurethane and acrylic resin in patients with defects in the maxillofacial area, which radiation therapy was conducted sufficiently different. Monitoring of adaptation indicators demonstrates the advantage of polyurethane structures to acrylic resins. The results can be used in the practice of dentists and orthopedists.

Bibliography
