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Research Article

**EVALUATION OF ELDERLY PATIENTS ADAPTATION TO
REMOVABLE DENTURES****K.A. Ershov, A.V. Sevbitov, A.E. Dorofeev, I.G. Pustokhina**

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In the elderly and senile age the need for medical care, including dental care, increases. The untimely appeal for dental care entails a change in the KPI index, as a result of which a partial or complete loss of teeth occurs. Complete absence of teeth is accompanied by morphofunctional changes of all elements of the dentoalveolar system and by significant decrease in chewing ability. Providing orthopedic dental care to the elderly, senile and old people is not easy due to the peculiarities of adaptation to removable dentures. In this study the impact of removable dentures on the quality of life of a dental patient was assessed. The study involved two identical patient groups of 17 people. The age of the patients was 61 to 75 years. All patients needed removable prosthetics. Before the prosthetics, a questionnaire was conducted using the OHIP-14 questionnaire. The questionnaire showed the level of the patients' satisfaction with their dental health. Then proceed to prosthetics. In the first group, the prosthesis was manufactured using a standard method. In the second group, the imprint was removed using a modified individual spoon, which should improve adaptation to a removable denture. The second questionnaire was conducted using the OHIP-14 questionnaire 33 days after the prosthesis, when all patients had complete adaptation to a removable denture. The questionnaire was conducted in order to reveal the dynamics of the quality of life of the patients. The results showed the effectiveness of the proposed method. The number of patients with a good quality of life in group 2 increased by 58.8% and in group 1 only by 34.5%. Thus, in group 2 adaptation to removable dentures was faster.

Keywords: gerontology, removable denture, quality of life, orthopedic dentistry

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INTRODUCTION:

Human aging, as the aging of other organisms, is a biological process of gradual degradation of parts and systems of the human body and the consequences of this process, for example, the loss of mental abilities. The loss of capacity is a great importance for humans. In addition, psychological, social and economic aspects are of great importance. In elderly and senile age the need of medical care, including dental, increases. The untimely appeal for dental care entails a change in the KPI index, as a result of which a partial or complete loss of teeth occurs. Complete absence of teeth is accompanied by morphofunctional changes of all elements of the dentoalveolar system and by significant decrease in chewing ability [1, 2, 3, 4, 8].

Providing orthopedic dental care to the elderly, senile and old people is not easy due to the peculiarities of adaptation to removable dentures. In some cases, clinical or laboratory correction of the denture is not enough. Clinical experience shows that not always there is a direct correlation between the intensity of discomfort in the use of full removable dentures, morphofunctional peculiarities of the masticatory system in cases of tooth loss and the quality of manufactured dentures [5, 6, 7, 9, 10].

Aim of our research

Improving the quality of orthopedic dental care for elderly patients in need of removable prosthetics.

MATERIALS AND METHODS:

The study was conducted in the dental office of medical-diagnostic department of Russian Federal scientific-methodological gerontological center. The study involved 34 people aged from 61 to 75 years. All patients were informed about the planned study and signed a voluntary informed consent. All patient were carried out orthopedic treatment in connection with partial adentia. The study included only patients with bilateral defects on the maxilla with a length of at least 4 teeth; with significant atrophy of the

alveolar process, before no removable prosthesis was performed for this category of patients; all patients were pre-therapeutically and surgically sanitized.

Rehabilitation was carried out with the partial removable denture. For the manufacture of dentures plastic Etakril and headset artificial plastic teeth STDent-02 of XPO "Stoma" company were used. The patients were divided into two equal groups of 17 people. In the first group the protocol for the manufacture of removable denture was standard and included the following stages:

Obtaining anatomical imprints using standard anatomical metal spoons and alginate mass, making plaster models, planning of borders of prosthetic; the manufacture of individual spoons from acrylic plastic and wax bases and occlusal rollers of the base wax; obtaining a compression of the functional imprints using a custom tray and the correcting mass S-silicone; determination of the height of the lower part of the face and fixation of the central ratio of the jaws with the help of wax bases and occlusal rollers; fabrication of plaster models control for individual compression of functional materials; production of wax basis with an acrylic artificial teeth; adjustment of a wax basis in the mouth, correction; making removable dentures; the fit and fixing of removable denture in the oral cavity.

In the second group we applied a modernized individual spoon. Used in the way individual spoon is pre-modeled taking into account characteristics of the prosthetic bed of the defect of the upper jaw, is subjected to a diagnostic assay for clarification of its borders. Further individual spoon is made of plastic and used to obtain a preliminary imprint of the base silicone material having a low viscosity, using functional tests to improve the quality of the print, and allows to obtain a compression mold of the prosthetic bed. After the necessary adjustments to the resulting preliminary compression of the imprint at its base the removal of the final imprint using a

silicone corrective masses, with a medium viscosity, is conducted.

To assess quality of life were used OHIP-14. The survey was carried out directly before the prosthesis, as well as 33 days after fixation of the prosthesis.

RESULTS AND ITS DISCUSSION:

Before prosthetics, all patients were questioned using the questionnaire OHIP-14, which allows determining the level of quality of life of a dental patient. The results are listed in Table 1.

Table 1: Quality of life of patients before prosthetics with OHIP-14

Quality of life \ Group	Group 1	Group 2
Good quality of life	3 people (17,6%)	1 people (5,9%)
Satisfactory quality of life	5 people (29,4%)	6 people (35,3%)
Unsatisfactory quality of life	9 people (52,9%)	10 people (58,8%)

After that, the partial removable dentures for all patients were made, but with the use of various technologies to remove the imprint. In the first group, standard procedures were carried out. In the second group, the imprint was taken with a modified individual spoon. 33 days after fixation of the prosthesis, when the adaptation to removable dentures occurred, a second questionnaire was conducted. The purpose of the questionnaire was to assess how much the quality of life of a dental patient improved after a removable prosthesis. The results obtained after the prosthesis are shown in Table 2

Table 2: Quality of life of patients after prosthetics with OHIP-14

Quality of life \ Group	Group 1	Group 2
Good quality of life	8 people (47,1%)	11 people (64,7%)
Satisfactory quality of life	7 people (41,1%)	5 people (29,4%)
Unsatisfactory quality of life	2 people (11,7%)	1 people (5,9%)

According to the results of the questionnaire before the prosthesis, it can be noted that the majority of patients in group 1 (52.9%) are not satisfied with their quality of life. A similar picture can be traced in group 2, where 58.8% of surveyed were not satisfied with their quality of life. These results indicate the need for rehabilitation of this category of patients.

After the prosthesis using two different methods, a survey was conducted again. The results of which were plotted, which can track the dynamics of the quality of life of patients. And in 1 and 2 group there is a positive dynamics, but the figures vary. In group 1, where the imprint was carried out according to the standard scheme, the number of patients who assessed their living standards as a good was of 47.1%. While in group 2, where the imprint was shot by a modified individual with a spoon, these patients were 64.7% over that in 1,5 times more than in group

1. Thus, in group 1, the number of patients with a good standard of living increased by 34, 5%, and in group 2, 58.8%, which indicates the effectiveness of the proposed methodology.

CONCLUSIONS:

Based on these results, we can say that the technique of imprint of the modified individual spoon is more effective compared to standard practice. This in turn allows you to improve the quality of life of dental patients and to accelerate the adaptation to the removable denture.

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