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ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии
საქართველოს სამედიცინო სიახლენი

GEORGIAN MEDICAL NEWS

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GMN: Georgian Medical News is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

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GMN: Медицинские новости Грузии - ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

GMN: Georgian Medical News – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებიდან.

WEBSITE

www.geomednews.com

К СВЕДЕНИЮ АВТОРОВ!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через **полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра**. Используемый компьютерный шрифт для текста на русском и английском языках - **Times New Roman (Кириллица)**, для текста на грузинском языке следует использовать **AcadNusx**. Размер шрифта - **12**. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.

2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.

3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).

5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. **Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи.** Таблицы и графики должны быть озаглавлены.

6. Фотографии должны быть контрастными, фотокопии с рентгенограмм - в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста **в tiff формате**.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.

8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов - <http://www.spinesurgery.ru/files/publish.pdf> и http://www.nlm.nih.gov/bsd/uniform_requirements.html. В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.

9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.

10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.

11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректур авторам не высылаются, вся работа и сверка проводится по авторскому оригиналу.

12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

При нарушении указанных правил статьи не рассматриваются.

REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

1. Articles must be provided with a double copy, in English or Russian languages and typed or computer-printed on a single side of standard typing paper, with the left margin of 3 centimeters width, and 1.5 spacing between the lines, typeface - **Times New Roman (Cyrillic)**, print size - 12 (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.

2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.

3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.

5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. **Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles.** Tables and graphs must be headed.

6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.

8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: http://www.nlm.nih.gov/bsd/uniform_requirements.html
http://www.icmje.org/urm_full.pdf

In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).

9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.

10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.

11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.

12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

**Articles that Fail to Meet the Aforementioned
Requirements are not Assigned to be Reviewed.**

ავტორთა საყურადღებო!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დავიცვათ შემდეგი წესები:

1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე, დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში - **Times New Roman (Кириллица)**, ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ **AcadNusx**. შრიფტის ზომა – 12. სტატიას თან უნდა ახლდეს CD სტატიით.

2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ, რუსულ და ქართულ ენებზე) ჩათვლით.

3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).

4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).

5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემავსებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.

6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები - დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრაფიის ფოტოსურათები წარმოადგინეთ პოზიტიური გამოსახულებით **tiff** ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შედეგების ან იმპრეგნაციის მეთოდი და აღნიშნოთ სურათის ზედა და ქვედა ნაწილები.

7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა – უცხოური ტრანსკრიპციით.

8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფხიხლებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.

9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.

10. სტატიის ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 5-ს.

11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.

12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

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PSYCHOMETRIC ASSESSMENT OF AN ADAPTED BILINGUAL (RUSSIAN–KAZAKH) VERSION OF THE UW-QOL V4.1 QUESTIONNAIRE AND ANALYSIS OF FUNCTIONAL REHABILITATION OUTCOMES IN PATIENTS OF THE REPUBLIC OF KAZAKHSTAN

Saipudinkyzy A¹, Yessirkepov Assilbek², Aitbayev Zhanabay³, Laktionova M⁴, Baimuratova M⁵.

¹Deputy Dean of the School of Dentistry, School of Dentistry, S.D. Asfendiyarov Kazakh National Medical University, Almaty, Republic of Kazakhstan.

²Candidate of Medical Sciences, S.D. Asfendiyarov Kazakh National Medical University, Almaty, Republic of Kazakhstan.

³S.D. Asfendiyarov Kazakh National Medical University, Almaty, Republic of Kazakhstan.

⁴Ph.D in Public Health, Obstetrician-gynecologist, LLP "Ls Clinic, Senior Lecturer at the Department of Public Health and Social Sciences of Medicine Medical University «KSPH», Almaty, Republic of Kazakhstan.

⁵PhD in Medicine, Associate Professor, Kazakh Medical University "Higher School of Public Health", Almaty, Republic of Kazakhstan.

Abstract.

Background: Surgical treatment of tumours of the maxilla and hard palate is often associated with persistent functional and psychosocial impairment, making quality-of-life assessment an important component of rehabilitation evaluation.

The objective of the present study was to assess the applicability and psychometric characteristics of an adapted bilingual (Russian–Kazakh) version of the UW-QOL v4.1 questionnaire in patients after surgical treatment of tumours of the maxilla, hard palate, and adjacent anatomical regions, as well as to analyse quality-of-life outcomes depending on the method of functional rehabilitation.

Materials and Methods: A cross-sectional study included 104 patients after surgical treatment of maxillary and hard palate tumours. Translation and cultural adaptation were performed using forward translation, expert consensus, and pilot testing. Internal consistency, test–retest reliability, and construct validity were assessed using standard psychometric methods. Statistical analysis was performed using IBM SPSS Statistics 26.0.

Results: The overall Cronbach's α coefficient for the 14 questionnaire domains was 0.878, indicating high internal consistency. Test–retest reliability demonstrated strong correlations across all domains ($r=0.904\text{--}0.983$; $p<0.001$). The lowest quality-of-life scores were observed in the "Saliva" (41.3 ± 21.2) and "Taste" (43.6 ± 21.5) domains. Patients with advanced-stage disease and those who underwent multimodal treatment had significantly lower Physical Function and Social-Emotional Function scores compared with patients with early-stage disease and monotherapy ($p\leq 0.001$). Patients using obturator prostheses demonstrated significantly higher quality-of-life scores than patients without prosthetic rehabilitation ($p<0.001$). Financial limitations were the most common reason for refusal of obturator rehabilitation (55.6%).

Conclusions: The adapted bilingual version of the UW-QOL v4.1 questionnaire used in the present study demonstrated good psychometric properties and may be applied for quality-of-life assessment in patients after surgical treatment of maxillary and hard palate tumours in the Republic of Kazakhstan. The findings also highlight the importance of accessible functional rehabilitation in this patient population.

Key words. UW-QOL, quality of life, maxillectomy, obturator, reconstructive surgery, psychometric validation, head and neck tumours, Kazakhstan.

Introduction.

Surgical treatment of malignant tumours of the maxilla, hard palate, maxillary sinus, and adjacent anatomical regions is frequently associated with the formation of complex post-resection maxillofacial defects resulting in persistent functional and aesthetic impairment [1,2]. In this group of patients, the consequences of both the disease and its treatment affect not only the anatomical integrity of tissues, but also essential functions, including mastication, swallowing, speech, breathing, and social communication [2–5]. Therefore, contemporary approaches to the management of patients with head and neck tumours are increasingly focused not only on survival and local tumour control, but also on quality-of-life assessment as an integral indicator of treatment and rehabilitation outcomes [1,6,7].

Even after successful oncological control, many patients continue to experience substantial limitations in daily activities and social adaptation. Quality-of-life outcomes are significantly influenced by the extent of resection, tumour localisation, disease stage, and the need for combined treatment [7–9]. One of the major factors associated with poorer functional outcomes remains radiotherapy, which is linked to xerostomia, mucositis, trismus, taste disturbances, and deterioration of tissues within the prosthetic bed [7,10–14]. As a result, patients undergoing multimodal treatment often demonstrate lower quality-of-life scores compared with those treated surgically without adjuvant therapy [8,9].

Prosthetic rehabilitation using obturator prostheses plays an important role in the rehabilitation of patients after maxillectomy. Obturator prostheses help restore separation between the oral and nasal cavities, improve speech and food intake, and facilitate social adaptation [4,7]. Several studies have shown that differences in quality of life between patients after reconstructive surgery and those using obturators are largely determined by the degree of functional compensation rather than solely by the method of defect closure [3–5,15–17]. These findings highlight the importance of evaluating rehabilitation outcomes from the perspective of patient-reported outcomes.

Despite the recognised clinical importance of prosthetic rehabilitation, its accessibility remains a major organisational challenge. Fabrication of obturator prostheses and subsequent prosthodontic management require specialised care, repeated adjustments, and long-term follow-up [18,19]. In Kazakhstan, such services are provided predominantly on a self-paid basis. At

the same time, patients after surgical treatment of maxillofacial tumours often face loss of working capacity, reduced social activity, altered appearance, and psychoemotional difficulties [1,2,4,10,20,21]. Under these conditions, financial limitations may become an independent barrier to полноценной functional rehabilitation.

Standardised patient-reported outcome measures are increasingly used for objective assessment of treatment and rehabilitation outcomes. One of the most widely used disease-specific instruments in patients with head and neck tumours is the University of Washington Quality of Life Questionnaire (UW-QOL) [22-25]. The UW-QOL assesses both physical functions, including chewing, swallowing, speech, taste, and salivation, and socio-emotional domains such as appearance, anxiety, mood, and activity [22,23]. In recent years, the questionnaire has been adapted and validated in multiple countries, demonstrating good internal consistency, reproducibility, and construct validity [7,14,26-30]. However, bilingual adaptation of the UW-QOL and its application in patients after maxillary and hard palate resections remain insufficiently studied in the Republic of Kazakhstan.

The objective of the present study was to assess the applicability and psychometric characteristics of an adapted bilingual (Russian–Kazakh) version of the UW-QOL v4.1 questionnaire in patients after surgical treatment of tumours of the maxilla, hard palate, and adjacent anatomical regions, as well as to analyse quality-of-life outcomes depending on the method of functional rehabilitation.

Materials and Methods.

The study was conducted at three medical organisations in the Republic of Kazakhstan providing specialized care for patients with maxillofacial tumours. In accordance with institutional confidentiality requirements, the names of the participating centres are not disclosed. The study protocol was approved by the Local Bioethics Committee of the Kazakhstan Medical University “Higher School of Public Health” (Protocol No. 1 dated 02.10.2025).

The study included patients who underwent surgical treatment between 2023 and 2025. Patient recruitment, survey completion, and data analysis were carried out from December 2025 to May 2026. At the time of participation, at least 6 months had elapsed since completion of definitive treatment. Initially, medical records of 453 patients were reviewed. After application of the inclusion and exclusion criteria, 147 patients met the eligibility criteria. Nine patients could not be contacted, and some declined participation. The final study sample comprised 104 patients.

Inclusion criteria:

The study included patients who:

- were aged 18 years or older;
- had malignant tumours of the maxilla, hard palate, maxillary sinus, alveolar process of the maxilla, or combined tumours requiring maxillectomy;
- underwent surgical treatment resulting in a post-resection defect of the maxilla and/or hard palate;
- completed definitive treatment at least 6 months before participation in the study;

- were able to understand and independently complete the questionnaire;
- provided written informed consent.

Exclusion criteria:

Patients were excluded if they:

- were younger than 18 years;
- had distant metastases;
- had active tumour recurrence at the time of the survey;
- had a severe general condition preventing participation;
- had pronounced cognitive, psychiatric, neurological, or speech impairments interfering with questionnaire completion;
- had head and neck tumours without formation of a post-resection defect of the maxilla or hard palate.

Tumour localisation was coded as follows:

- 1 — malignant tumours of the maxilla;
- 2 — malignant tumours of the hard palate;
- 3 — malignant tumours of the maxillary sinus;
- 4 — tumours of the alveolar process of the maxilla;
- 5 — combined tumours requiring maxillectomy.

The cross-cultural adaptation and validation process followed the recommendations of Tsang et al. (2017).

Translation and cultural adaptation of the questionnaire.

Quality of life was assessed using the UW-QOL v4.1 questionnaire, which includes 14 quality-of-life domains and additional general questions. The questionnaire evaluates the patient's condition during the previous 7 days, where 0 points correspond to the worst and 100 points to the best possible outcome.

Translation and linguistic adaptation of the questionnaire were performed by two professional translators and two specialists in maxillofacial surgery fluent in both Russian and Kazakh languages. Independent forward translations were completed followed by reconciliation through expert consensus. After discussion, the Russian and Kazakh versions were considered semantically and conceptually equivalent to the original questionnaire.

Considering the widespread bilingual communication in the Republic of Kazakhstan, patients were provided with a single bilingual version of the questionnaire in which each question and response option were presented simultaneously in Russian and Kazakh languages. This approach was used to improve comprehension and minimize differences in interpretation of questionnaire items.

Pilot testing of the bilingual questionnaire was conducted in a focus group of 30 patients. Participants evaluated the clarity of the questions, response options, and questionnaire structure. No significant difficulties in understanding were identified, which allowed the bilingual version to be used in the main study.

The bilingual Russian–Kazakh adaptation of the UW-QOL v4.1 questionnaire was developed for use within the present study. The authors do not claim official endorsement or ownership of the translated instrument.

The main survey included 104 patients who met the inclusion criteria. The sample size met commonly accepted recommendations for psychometric validation studies, which

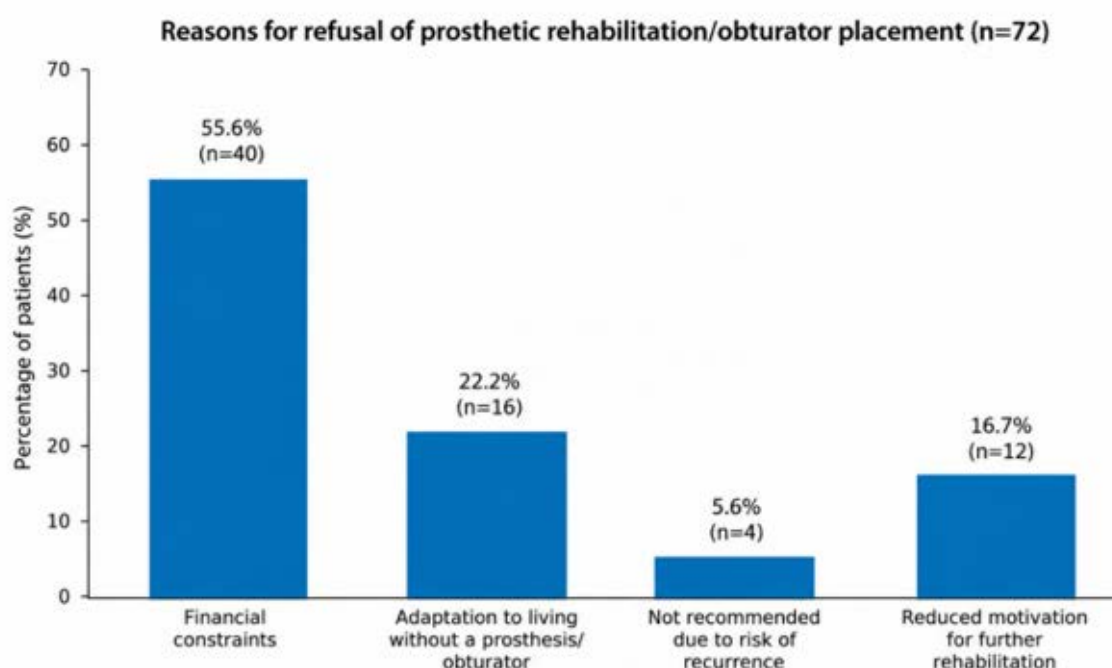


Figure 1. Reasons for refusal of prosthetic rehabilitation/obturator placement among patients after surgical treatment (n=72).

Table 1. Demographic and clinical characteristics of patients.

Variable	Groups	Preliminary group (n=30) n (%)	Validation group (n=104) n (%)
Age, years [mean±SD (min–max)]		60.8±5.7 (46–71)	61.5±6.7 (41–79)
Sex	Male	23 (76.7)	83 (79.8)
	Female	7 (23.3)	21 (20.2)
Language of questionnaire completion	Russian	20 (66.7)	67 (64.4)
	Kazakh	10 (33.3)	37 (35.6)
Place of residence	Urban	26 (86.7)	92 (88.5)
	Rural	4 (13.3)	12 (11.5)
Education	Secondary	5 (16.7)	19 (18.3)
	Vocational secondary	21 (70.0)	73 (70.2)
	Higher	4 (13.3)	12 (11.5)
Employment status	Employed	14 (46.7)	46 (44.2)
	Unemployed	16 (53.3)	58 (55.8)
Tumor localization	Maxilla	17 (56.7)	58 (55.8)
	Hard palate	7 (23.3)	26 (25.0)
	Maxillary sinus	3 (10.0)	9 (8.7)
	Alveolar process of the maxilla	1 (3.3)	3 (2.9)
	Combined tumors	2 (6.7)	8 (7.7)
T stage	T1	11 (36.7)	37 (35.6)
	T2	12 (40.0)	41 (39.4)
	T3	5 (16.7)	18 (17.3)
	T4	2 (6.7)	8 (7.7)
N stage	N0	25 (83.3)	86 (82.7)
	N1–N2	5 (16.7)	18 (17.3)
Clinical stage	I–II	23 (76.7)	78 (75.0)
	III–IV	7 (23.3)	26 (25.0)
Type of treatment	Monotherapy	7 (23.3)	23 (22.1)
	Multimodal treatment	23 (76.7)	81 (77.9)
Radiotherapy	No	7 (23.3)	22 (21.2)
	Yes	23 (76.7)	82 (78.8)
Chemotherapy	No	22 (73.3)	78 (75.0)
	Yes	8 (26.7)	26 (25.0)

Reconstructive surgery	No	27 (90.0)	94 (90.4)
	Yes	3 (10.0)	10 (9.6)
Obturator	No	21 (70.0)	72 (69.2)
	Yes	9 (30.0)	32 (30.8)
Smoking	Non-smoker	2 (6.7)	6 (5.8)
	Former smoker	7 (23.3)	23 (22.1)
	Current smoker	21 (70.0)	75 (72.1)
Alcohol consumption	No	7 (23.3)	23 (22.1)
	Rarely	16 (53.3)	55 (52.9)
	Frequently	7 (23.3)	26 (25.0)

Table 2. Results of UW-QOL v4.1 domain assessment in patients of the validation group.

UW-QOL v4.1 domain	n	Mean±SD	Me (IQR)	Min–Max	% of patients with maximum score
Pain	104	71.9±16.5	75 (75–75)	25–100	9.6
Appearance	104	63.9±26.5	75 (50–75)	0–100	17.3
Activity	104	61.1±25.1	75 (50–75)	0–100	10.6
Recreation	104	61.3±24.6	75 (50–75)	0–100	9.6
Swallowing	104	54.6±26.5	50 (30–70)	30–100	15.4
Chewing	104	64.8±24.7	50 (50–100)	0–100	30.8
Speech	104	69.1±17.3	70 (70–70)	30–100	12.5
Shoulder	104	91.8±18.2	100 (100–100)	0–100	78.8
Taste	104	43.6±21.5	30 (30–70)	0–70	0
Saliva	104	41.3±21.2	30 (30–70)	0–70	0
Mood	104	61.1±24.8	75 (50–75)	0–100	9.6
Anxiety	104	61.9±26.4	75 (50–75)	0–100	6.7
Intimacy*	34	54.9±26.7	70 (30–70)	0–100	11.8
Fear of recurrence	104	60.9±26.8	75 (50–75)	0–100	5.8

Note: Mean±SD — mean value and standard deviation; Me (IQR) — median and interquartile range; Min–Max — minimum and maximum values of the indicator.

* The “Intimacy” domain was not completed by all patients.

Table 3. Internal consistency indicators of the bilingual version of the UW-QOL v4.1 questionnaire.

UW-QOL v4.1 domain	Corrected item-total correlation	Cronbach’s α if domain deleted
Pain	0.678	0.861
Appearance	0.854	0.846
Activity	0.796	0.850
Recreation	0.828	0.848
Swallowing	0.752	0.852
Chewing	0.668	0.858
Speech	0.671	0.859
Shoulder	0.292	0.874
Taste	0.465	0.868
Saliva	0.331	0.874
Mood	0.823	0.848
Anxiety	0.032	0.890
Intimacy	0.400	0.872
Fear of recurrence	0.021	0.892

The overall Cronbach’s α coefficient for the 14 domains was 0.878.

Note: corrected item-total correlation reflects the degree of association between an individual domain and the total questionnaire score; Cronbach’s α if domain deleted indicates the value of the internal consistency coefficient after removal of the corresponding domain from the analysis.

Table 4. Test-retest evaluation results of the bilingual version of the UW-QOL v4.1 questionnaire.

UW-QOL v4.1 domain	Initial testing, Mean±SD	Retest, Mean±SD	Spearman's r	p
Pain	71.89±16.54	71.89±16.54	0.930	<0.001
Appearance	63.94±26.49	63.22±26.52	0.964	<0.001
Activity	61.06±25.08	60.34±25.03	0.976	<0.001
Recreation	61.30±24.60	60.10±25.01	0.943	<0.001
Swallowing	54.62±26.47	52.12±26.86	0.916	<0.001
Chewing	64.81±24.73	64.33±24.53	0.941	<0.001
Speech	69.13±17.30	69.52±16.86	0.940	<0.001
Shoulder	91.83±18.16	91.54±18.26	0.922	<0.001
Taste	43.56±21.54	43.17±21.42	0.983	<0.001
Saliva	41.35±21.23	40.58±20.89	0.965	<0.001
Mood	61.06±24.84	60.34±24.29	0.921	<0.001
Anxiety	61.87±26.37	60.42±26.52	0.904	<0.001
Intimacy*	54.85±26.70	52.79±25.80	0.951	<0.001
Fear of recurrence	60.90±26.78	60.18±26.50	0.960	<0.001

Table 5. Construct validity of the bilingual version of the UW-QOL v4.1 questionnaire.

Compared groups	n	Physical Function, Mean±SD	p	Social-Emotional Function, Mean±SD	p
Monotherapy	22	72.16±11.54	<0.001**	77.20±9.67	0.001**
Multimodal treatment	77	51.95±15.62		65.63±16.03	
Early stage	74	62.47±12.92	<0.001**	74.48±9.46	<0.001**
Late stage	25	38.60±15.12		49.61±15.40	

Note:

— Student's t-test for independent samples;

** — Mann–Whitney U test.

Table 6. Quality of life indicators depending on the method of functional rehabilitation.

Compared groups	n	Physical Function, Mean±SD	p	Social-Emotional Function, Mean±SD	p
Obturator not used	67	51.00±16.15	<0.001**	63.87±15.70	<0.001**
Obturator used	32	67.84±12.65		77.27±10.81	
Reconstructive surgery not performed	89	54.50±16.55	<0.001*	67.49±15.98	0.179*
Reconstructive surgery performed	10	73.67±10.15		74.50±9.83	
Obturator	32	67.40±10.92	0.172**	76.91±11.06	0.3**
Reconstructive surgery	10	72.58±9.28		72.83±10.57	

Note:

— Student's t-test for independent samples;

** — Mann–Whitney U test.

suggest inclusion of at least 5–10 respondents per questionnaire item [31]. Given the 14 domains of the UW-QOL v4.1 questionnaire, this requirement was fulfilled.

To assess test–retest reliability, a subgroup of patients completed the questionnaire again 14 days after the initial assessment.

Analyzed variables:

The study analysed demographic, clinical, and functional characteristics, including age, sex, tumour localisation, TNM classification, disease stage, radiotherapy, chemotherapy, mono- or multimodal treatment, reconstructive surgery, trismus, xerostomia, tube or gastrostomy feeding, and use of an obturator prosthesis.

Quality-of-life outcomes across all 14 UW-QOL v4.1 domains were additionally assessed, together with composite physical and socio-emotional functioning scores.

Construct validity was evaluated by comparing quality-of-life indicators between patients with early and advanced stages of disease, monotherapy and multimodal treatment, presence or

absence of reconstructive surgery or obturator prosthesis, as well as between patients with different functional impairments.

Functional rehabilitation outcomes were additionally evaluated by comparing quality-of-life indicators between patients with and without obturator prostheses, with and without reconstructive surgery, and between patients after reconstructive surgery and those using obturators. The analysis was performed using composite physical and socio-emotional functioning scores of the UW-QOL v4.1 questionnaire. In patients who did not undergo prosthetic rehabilitation, reasons for refusal or non-use of obturator prostheses were additionally assessed.

Statistical analysis:

Statistical analysis was performed using IBM SPSS Statistics version 26.0.

For quantitative variables, mean values, standard deviations, medians, and interquartile ranges were calculated. Categorical variables are presented as absolute numbers and percentages.

Internal consistency of the questionnaire was assessed using Cronbach's alpha coefficient. Test–retest reliability over a

14-day interval was evaluated using the intraclass correlation coefficient. Spearman correlation analysis was performed to assess associations between questionnaire domains, composite physical and socio-emotional functioning scores, and clinical characteristics.

Comparisons between two independent groups were performed using the Mann–Whitney U test. Comparisons among three or more groups were conducted using the Kruskal–Wallis test. Pearson’s χ^2 test and Fisher’s exact test were used for categorical variables. Differences were considered statistically significant at $p < 0.05$.

Results.

A total of 30 consecutively recruited patients participated in the preliminary testing of the bilingual UW-QOL v4.1 questionnaire. No major difficulties in understanding the items or response options in Russian or Kazakh were reported. The mean completion time was 8.3 ± 2.4 minutes. Following preliminary testing, the bilingual version was approved for further psychometric evaluation.

The validation stage included 104 patients who met the inclusion criteria. The sample size was considered sufficient for psychometric evaluation, corresponding to recommended respondent-to-item ratios for patient-reported outcome measures.

The mean age of participants was 61.5 ± 6.7 years (range 41–79 years). Most patients were male (79.8%) and resided in urban areas (88.5%). Tumours of the maxilla (55.8%) and hard palate (25.0%) predominated. Early-stage disease (stages I–II) was observed in 75.0% of patients. Most participants underwent multimodal treatment (77.9%), while radiotherapy was administered in 78.8% of cases. Obturators were used by 30.8% of patients, and 72.1% were current smokers (Table 1).

Results of the UW-QOL v4.1 domain analysis are presented in Table 2. The highest mean score was observed in the “Shoulder” domain (91.8 ± 18.2), while relatively high scores were also recorded for “Pain” (71.9 ± 16.5) and “Speech” (69.1 ± 17.3).

The lowest quality-of-life scores were identified in the “Saliva” (41.3 ± 21.2) and “Taste” (43.6 ± 21.5) domains. Reduced scores were additionally observed for swallowing, intimacy, fear of recurrence, activity, mood, and anxiety. Scores for appearance and chewing were 63.9 ± 26.5 and 64.8 ± 24.7 , respectively.

Overall, the findings reflected the predominant impact of treatment for maxillary and hard palate malignancies on oral functions, taste perception, and psychoemotional well-being.

Results of the internal consistency analysis of the bilingual UW-QOL v4.1 questionnaire are presented in Table 3. The overall Cronbach’s α coefficient for the 14 domains was 0.878, indicating high internal consistency of the instrument.

The highest corrected item–total correlations were observed for the domains “Appearance” (0.854), “Recreation” (0.828), “Mood” (0.823), and “Activity” (0.796). High correlations were also identified for swallowing, pain, chewing, and speech domains. In contrast, lower correlations were found for “Shoulder” (0.292), “Anxiety” (0.032), and “Fear of recurrence” (0.021), suggesting relative independence of these functional and psychoemotional dimensions from the overall quality-of-life construct.

Sequential exclusion of individual domains resulted in Cronbach’s α values ranging from 0.846 to 0.892, with no substantial improvement in internal consistency following removal of any domain. These findings support the satisfactory structural consistency of the bilingual UW-QOL v4.1 and confirm the retention of all questionnaire domains.

Results of the test–retest reliability assessment of the bilingual UW-QOL v4.1 questionnaire are presented in Table 4. Reassessment performed after a 14-day interval demonstrated comparable mean scores across all questionnaire domains. The highest baseline score was observed for the “Shoulder” domain (91.83 ± 18.16), whereas the lowest scores were recorded for “Saliva” (41.35 ± 21.23) and “Taste” (43.56 ± 21.54). A similar pattern was observed at retesting.

Strong positive correlations were identified between baseline and repeated assessments across all domains ($p < 0.001$). Spearman’s correlation coefficients ranged from 0.904 to 0.983, indicating high stability and reproducibility of the bilingual UW-QOL v4.1 questionnaire. The strongest correlations were observed for the domains “Taste” ($r = 0.983$), “Activity” ($r = 0.976$), “Saliva” ($r = 0.965$), “Appearance” ($r = 0.964$), and “Fear of recurrence” ($r = 0.960$).

Results of the construct validity assessment of the bilingual UW-QOL v4.1 questionnaire are presented in Table 5. Patients with early-stage disease demonstrated significantly higher quality-of-life scores compared with those with advanced-stage disease. Physical Function scores were 62.47 ± 12.92 versus 38.60 ± 15.12 , respectively ($p < 0.001$), while Social-Emotional Function scores were 74.48 ± 9.46 and 49.61 ± 15.40 , respectively ($p < 0.001$).

A similar pattern was observed according to treatment modality. Patients treated with monotherapy reported significantly higher quality-of-life scores than those who underwent multimodal treatment. Physical Function scores were 72.16 ± 11.54 and 51.95 ± 15.62 , respectively ($p < 0.001$), whereas Social-Emotional Function scores were 77.20 ± 9.67 and 65.63 ± 16.03 , respectively ($p = 0.001$).

These findings demonstrate the ability of the bilingual UW-QOL v4.1 questionnaire to discriminate between patient groups differing in disease severity and treatment burden, supporting its good construct validity.

Additional analysis of quality-of-life outcomes according to the method of functional rehabilitation is presented in Table 6. Patients using obturators demonstrated significantly higher quality-of-life scores compared with those without obturator rehabilitation. Physical Function scores were 67.84 ± 12.65 versus 51.00 ± 16.15 , respectively ($p < 0.001$), while Social-Emotional Function scores were 77.27 ± 10.81 and 63.87 ± 15.70 , respectively ($p < 0.001$).

Patients who underwent reconstructive surgery also demonstrated higher Physical Function scores compared with patients without reconstructive intervention (73.67 ± 10.15 vs 54.50 ± 16.55 ; $p < 0.001$). However, differences in Social-Emotional Function did not reach statistical significance (74.50 ± 9.83 vs 67.49 ± 15.98 ; $p = 0.179$).

Direct comparison between patients after reconstructive surgery and those using obturators revealed no significant differences in either Physical Function or Social-Emotional

Function scores ($p=0.169$ and $p=0.283$, respectively), indicating comparable quality-of-life outcomes for both rehabilitation approaches.

Among the 72 patients who did not undergo prosthetic rehabilitation or obturator placement after surgical treatment, the most common reason for refusal was financial limitation, reported by 40 patients (55.6%). Adaptation to life without a prosthesis/obturator was the second most frequent reason (22.2%), followed by reduced motivation for further rehabilitation (16.7%). Lack of recommendation for prosthetic rehabilitation due to the perceived risk of disease recurrence was reported least frequently (5.6%).

These findings have important clinical and organizational implications. Patients using obturators demonstrated significantly better quality-of-life outcomes in both physical and social-emotional functioning domains. However, obturator fabrication and prosthetic rehabilitation are predominantly provided on a self-funded basis. In contrast, reconstructive surgery is covered by the republican healthcare budget according to clinical indications, disease prognosis, and patient consent. This difference may partly explain the predominance of financial barriers among the reasons for refusal of prosthetic rehabilitation.

Discussion.

In the present study, linguistic adaptation and psychometric validation of the bilingual (Russian–Kazakh) version of the UW-QOL v4.1 questionnaire were performed in patients after surgical treatment of tumours of the maxilla, hard palate, and adjacent anatomical regions. The findings demonstrated high internal consistency, good reproducibility, and satisfactory construct validity of the questionnaire, supporting its applicability for assessment of quality of life in patients of the Republic of Kazakhstan after treatment of head and neck tumours.

One of the main findings of the study was the high internal consistency of the bilingual UW-QOL v4.1 version. The overall Cronbach's alpha coefficient was 0.878, which is comparable to results reported in international studies on cross-cultural adaptation of this instrument [14,26–29,30,32–34]. In the Serbian version, Cronbach's alpha ranged from 0.802 to 0.816 [24], whereas values of 0.829, 0.87, and 0.722–0.749 were reported for the Moroccan, Nepalese, and Persian versions, respectively [14,26,30]. Similar results were obtained in the Malayalam adaptation of the UW-QOL, where Cronbach's alpha reached 0.837 [34]. These data indicate stability of the questionnaire structure and reproducibility of its psychometric properties across different linguistic and sociocultural settings.

High test–retest correlation coefficients ($r=0.904$ – 0.983 ; $p<0.001$) additionally confirmed good reproducibility of the bilingual UW-QOL v4.1 version. The highest stability was observed for the domains “Taste”, “Activity”, “Saliva”, “Appearance”, and “Fear of recurrence”. These domains are of particular importance in patients after treatment of head and neck tumours, as they directly reflect the impact of the disease and treatment on daily activities, communication, and psychological well-being.

The lowest quality-of-life scores in the present study were observed in the “Saliva” and “Taste” domains. Similar findings

have been described in previous studies [14,34]. This may be related to the high proportion of patients who underwent radiotherapy in the present cohort (78.8%). Radiotherapy for head and neck tumours is associated with xerostomia, taste disturbances, mucositis, fibrosis of soft tissues, and restricted mouth opening, all of which substantially affect physical functioning and quality of life [10–13,34]. Patel et al. [29] also reported significantly lower quality-of-life scores in patients with advanced disease stages and after multimodal treatment.

The construct validity analysis performed in the present study demonstrated similar patterns. Patients with advanced-stage disease had significantly lower Physical Function and Social-Emotional Function scores compared with patients with early-stage disease ($p<0.001$). Similar differences were observed between patients who underwent multimodal treatment and those treated with monotherapy. These findings are likely associated with a greater extent of surgical treatment, more pronounced functional impairment, and the need for adjuvant radiotherapy and/or chemotherapy.

Analysis of quality-of-life indicators according to the method of functional rehabilitation demonstrated several clinically important findings. Patients using obturator prostheses had significantly higher scores for both physical and social-emotional functioning compared with patients who did not undergo prosthetic rehabilitation. Physical Function scores were 67.84 ± 12.65 and 51.00 ± 16.15 , respectively ($p<0.001$), while Social-Emotional Function scores were 77.27 ± 10.81 and 63.87 ± 15.70 , respectively ($p<0.001$). The obtained data suggest a substantial contribution of prosthetic rehabilitation to restoration of oral function, social adaptation, and psychological well-being in patients after maxillectomy.

At the same time, no statistically significant differences were identified between patients after reconstructive surgery and those using obturator prostheses. Similar findings have been reported in several international studies [3–5,15–17,25], where authors concluded that overall quality of life depends less on the reconstruction technique itself and more on the degree of functional compensation achieved after treatment. In patients with tumours of the maxilla and hard palate, restoration of speech, swallowing, and social interaction may have greater influence on subjective quality-of-life perception than the specific reconstructive approach.

Assessment of patients after maxillectomy using obturator prostheses remains a separate issue. Elhamdi et al. [10] noted that general quality-of-life questionnaires do not always adequately reflect problems specific to obturator rehabilitation. Difficulties related to leakage of food and liquids, prosthesis instability, articulation problems, impaired communication, and psychological discomfort may not be sufficiently captured by integral quality-of-life scales [10]. For this reason, the authors recommended combining the UW-QOL with specialised instruments evaluating obturator function, including the Obturator Functioning Scale (OFS) [10]. Use of such instruments may allow more detailed assessment of prosthetic rehabilitation outcomes in patients of the Republic of Kazakhstan.

The socioeconomic aspect of rehabilitation should also be considered. Patients after surgery involving the maxilla and hard palate often experience reduced working capacity, limitations

in social activity, and psychosocial difficulties associated with changes in appearance, speech impairment, and nutritional dysfunction [1,2,10,20,21,35]. In the present study, among 72 patients who did not undergo prosthetic rehabilitation or obturator placement, the most common reason for refusal was financial limitation, reported by 40 patients (55.6%). Another 16 patients (22.2%) reported that they had adapted to life without a prosthesis and did not consider further prosthetic treatment necessary. Reduced motivation for further rehabilitation was observed in 12 patients (16.7%). In addition, 4 patients (5.6%) indicated that prosthetic rehabilitation had not been recommended because of concerns regarding possible tumour recurrence.

The obtained results suggest that refusal of prosthetic rehabilitation is associated not only with financial barriers, but also with psychological factors. Some patients continue to experience anxiety, fear of recurrence, emotional exhaustion, and reduced motivation for recovery even after completion of antitumour treatment, particularly in the presence of marked facial changes and persistent functional impairment.

Similar observations were reported by Patel et al. [29], who described the influence of both financial limitations and psychological condition on adherence to reconstructive treatment and subsequent quality-of-life outcomes. In the present study, patients using obturator prostheses demonstrated significantly higher indicators not only of physical functioning, but also of social-emotional functioning, suggesting a positive effect of rehabilitation on self-esteem, social adaptation, and psychological well-being.

The presented data support the need for a multidisciplinary rehabilitation approach in patients after maxillectomy, including surgical, prosthetic, and psychological support at different stages of treatment and recovery. In addition, considering the high proportion of patients who refused prosthetic rehabilitation because of financial reasons, accessibility of prosthetic care represents an important organisational issue for the healthcare system of the Republic of Kazakhstan.

Strengths of the study.

A major strength of the study was the bilingual linguistic and cultural adaptation of the UW-QOL v4.1 questionnaire for Russian- and Kazakh-speaking populations of the Republic of Kazakhstan, followed by evaluation of its psychometric properties. Translation was performed using forward and backward translation, expert consensus, and pilot testing, which ensured good comprehensibility and conceptual equivalence of both language versions.

Despite the relative rarity of tumours of the maxilla and hard palate, the study included 104 patients. Considering the 14 domains of the UW-QOL v4.1 questionnaire, the sample size corresponded to commonly recommended respondent-to-item ratios used in psychometric validation studies of patient-reported outcome measures.

Another strength of the study was the comprehensive nature of the analysis. The study evaluated not only internal consistency and test-retest reliability of the bilingual UW-QOL v4.1 version, but also construct validity depending on disease stage, treatment extent, radiotherapy, and method of functional rehabilitation.

The practical relevance of the study is additionally supported by analysis of reasons for refusal of prosthetic rehabilitation. It was demonstrated that refusal of obturator use was associated not only with financial limitations, but also with psychological factors, including fear of recurrence, reduced motivation for further recovery, and adaptation to life without a prosthesis. These findings highlight the clinical, organisational, and psychosocial complexity of rehabilitation in patients after maxillectomy.

Limitations of the study.

The study has several limitations. First, the cross-sectional design did not allow assessment of longitudinal changes in quality of life after surgical treatment and during different stages of rehabilitation.

The relatively small number of patients after reconstructive surgery compared with the obturator group should also be considered. Although no statistically significant differences in quality-of-life indicators were identified between these groups, the results should be interpreted cautiously, since unequal sample sizes may have influenced the stability of comparative analyses. Further studies with more balanced groups are required for a more reliable comparison of different rehabilitation approaches.

In addition, the UW-QOL v4.1 is a general disease-specific questionnaire for patients with head and neck tumours and does not fully reflect certain aspects of obturator functioning, including prosthesis stability, leakage of food and liquids, or fixation characteristics. Future studies using additional specialised instruments designed specifically for patients after obturator rehabilitation may provide more detailed assessment of functional rehabilitation outcomes.

It should also be noted that part of the data was based on patient self-reporting, which may be associated with potential information bias.

Conclusion.

The adapted bilingual version of the UW-QOL v4.1 questionnaire used in the present study demonstrated good psychometric properties and may be applied for quality-of-life assessment in patients after surgical treatment of maxillary and hard palate tumours in the Republic of Kazakhstan. The findings also highlight the importance of accessible functional rehabilitation in this patient population.

Conflict of Interest.

The authors declare no conflict of interest.

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UW-QOL v4.1 კითხვარის ადაპტირებული ორენოვანი (რუსულ-ყაზახური) ვერსიის ფსიქომეტრიული შეფასება და ყაზახეთის რესპუბლიკის პაციენტებში ფუნქციური რეაბილიტაციის შედეგების ანალიზი

ფონი: ზედა ყბისა და მაგარი სასის სიმსივნეების ქირურგიული მკურნალობა ხშირად ასოცირდება მუდმივ ფუნქციურ და ფსიქოსოციალურ დარღვევასთან, რაც ცხოვრების ხარისხის შეფასებას რეაბილიტაციის შეფასების მნიშვნელოვან კომპონენტად აქცევს.

ამ კვლევის მიზანი იყო UW-QOL v4.1 კითხვარის ადაპტირებული ორენოვანი (რუსულ-ყაზახური) ვერსიის გამოყენებადობისა და ფსიქომეტრიული მახასიათებლების შეფასება ზედა ყბის, მაგარი სასის და მიმდებარე ანატომიური რეგიონების სიმსივნეების ქირურგიული მკურნალობის შემდეგ პაციენტებში, ასევე ცხოვრების ხარისხის შედეგების ანალიზი ფუნქციური რეაბილიტაციის მეთოდის მიხედვით.

მასალები და მეთოდები: ზედა ყბის და მაგარი სასის სიმსივნეების ქირურგიული მკურნალობის შემდეგ ჩატარებულ ჯვარედინი კვლევაში მონაწილეობდა 104 პაციენტი. ტრანსლაცია და კულტურული ადაპტაცია ჩატარდა პირდაპირი ტრანსლაციის, ექსპერტთა

კონსენსუსის და პილოტური ტესტირების გამოყენებით. შიდა თანმიმდევრულობა, ტესტ-ხელახალი ტესტირების სანდოობა და კონსტრუქტის ვალიდურობა შეფასდა სტანდარტული ფსიქომეტრიული მეთოდების გამოყენებით. სტატისტიკური ანალიზი ჩატარდა IBM SPSS Statistics 26.0-ის გამოყენებით.

შედეგები: კრონბახის α კოეფიციენტი 14 კითხვარის დომენისთვის იყო 0.878, რაც მაღალ შინაგან თანმიმდევრულობაზე მიუთითებს. ტესტირება-ხელახალი ტესტირების სანდოობამ აჩვენა ძლიერი კორელაცია ყველა დომენში ($r=0.904-0.983$; $p<0.001$). ცხოვრების ხარისხის ყველაზე დაბალი ქულები დაფიქსირდა „ნერწყვის“ (41.3 ± 21.2) და „გემოს“ (43.6 ± 21.5) დომენებში. დაავადების გვიან სტადიის მქონე პაციენტებს და მულტიმოდალური მკურნალობის მიმღებ პაციენტებს მნიშვნელოვნად დაბალი ფიზიკური ფუნქციის და სოციალურ-ემოციური ფუნქციის ქულები ჰქონდათ დაავადების ადრეული სტადიის მქონე და მონოთერაპიის მქონე პაციენტებთან შედარებით ($p\leq 0.001$). ობტურატორული პროთეზების გამოყენებით პაციენტებს ცხოვრების ხარისხის მნიშვნელოვნად მაღალი ქულები ჰქონდათ, ვიდრე პროთეზული რეაბილიტაციის არმქონე პაციენტებს ($p<0.001$). ფინანსური შეზღუდვები იყო ობტურატორულ რეაბილიტაციაზე უარის თქმის ყველაზე გავრცელებული მიზეზი (55.6%).

დასკვნები: კვლევაში გამოყენებულმა UW-QOL v4.1 კითხვარის ადაპტირებულმა ორენოვანმა ვერსიამ კარგი ფსიქომეტრიული თვისებები აჩვენა და მისი გამოყენება შესაძლებელია ყაზახეთის რესპუბლიკაში ზედა ყბის და მაგარი სასის სიმსივნეების ქირურგიული მკურნალობის შემდეგ პაციენტებში ცხოვრების ხარისხის შესაფასებლად. დასკვნები ასევე ხაზს უსვამს პაციენტთა ამ პოპულაციაში ხელმისაწვდომი ფუნქციური რეაბილიტაციის მნიშვნელობას.

საკვანძო: UW-QOL, ცხოვრების ხარისხი, ზედა ყბის ქირურგია, ობტურატორი, რეკონსტრუქციული ქირურგია, ფსიქომეტრიული ვალიდაცია, თავისა და კისრის სიმსივნეები, ყაზახეთი.