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ANALYSIS OF SOCIO-HYGIENIC INDICATORS IN PATIENTS WITH ORAL CAVITY CANCER

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Abstract
In assessing the socio-hygienic conditions of patients diagnosed with oral cavity cancer (OCC), the results of hygienic evaluation of physical condition indicators and the prevalence of existing diseases showed that the average age of patients was 56.2 ± 6.5 years, the average height — 165.2 ± 7.4 cm, and the average body weight — 61.5 ± 4.2 kg. The body mass index (BMI) was 21.8 ± 2.3. According to age distribution, patients were divided into five groups for analysis. The analysis of comorbid diseases revealed that K00–K93 accounted for 51.0%, I00–I99 for 40.4%, and E00–E90 for 12.7%. The evaluation of primary socio-hygienic indicators in patients diagnosed with oral cavity cancer allows for the early identification of risk factors contributing to disease development and associated comorbidities.

Keywords: Oral cavity cancer (OCC), age groups, body mass index (BMI), morbidity.

Introduction

Oral cavity cancer (OCC) is one of the most common oncological diseases worldwide. According to the World Health Organization (WHO), more than 300,000 new cases are recorded annually. This study focuses on assessing the nutritional status of OCC patients in Uzbekistan, providing local data through internationally standardized methods such as BMI, PNI, and MNA [2,4].

The relevance of this research lies in the fact that early nutritional screening can improve patients' quality of life and reduce treatment costs. For example, studies conducted in developing countries have shown that malnutrition doubles the risk of mortality among OCC patients [9,10].

In addition, the psychological and social consequences of nutritional disorders in OCC patients are significant: malnutrition can lead to depression and social isolation. This study aims to explore the relationship between nutritional status and disease stages in OCC patients, improve assessment methods, and develop nutritional support strategies. These findings may contribute to the implementation of new approaches within Uzbekistan's healthcare system [6].

The increase in OCC cases in Uzbekistan (21,976 new cases in 2020) highlights the importance and urgency of this research [1,5,8]. When compared with existing national oncological morbidity data, it was found that only 16.75% of cases are associated with quantitatively measurable factors within the socio-hygienic monitoring system [3,6].

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Research Objective

The aim of the study is to perform a hygienic analysis of morbidity patterns among patients diagnosed with oral cavity cancer (OCC).

Materials and Methods

The study was conducted at the Tashkent Regional Branch of the Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology. The research material consisted of data from 47 patients diagnosed with oral cavity cancer. The data included anthropometric measurements, frequency and types of food consumption, comorbid diseases, and nutritional habits. The study group included 25 men (62.5%) and 15 women (37.5%), aged 21 to 77 years (mean 56.2 ± 16.5 years). Most of the patients were residents of the Tashkent region (Chirchik – 4, Qibray – 3, Zangiota – 3, and others).

Assessment of Anthropometric Indicators: Height (cm), weight (kg), and body mass index (BMI, kg/m²) were calculated. BMI categories were determined according to WHO standards:

- <18.5 – underweight
- 18.5–24.9 – normal weight
- ≥25 – overweight

The BMI was calculated using the formula:

BMI = body weight (kg) / height² (m²)

Comorbid Disease Classification: Comorbid conditions in patients diagnosed with OCC were analyzed based on medical history and a specialized questionnaire developed for this study.

Statistical Analysis: Data analysis was performed using Python (libraries: pandas, numpy, scipy). Descriptive statistics included mean values (± standard deviation), Pearson correlation, and group comparisons by gender, age, and BMI.

Results

The study involved 47 patients diagnosed with oral cavity cancer at the Tashkent Regional Branch of the Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology. The socio-hygienic indicators of patients with oral cavity cancer are presented in Table 1.

Table 1 Socio-Hygienic Indicators of Patients with Oral Cavity Cancer

Anthropometric Indicators		
Age (years)	56.2±6.5	
Height (cm)	165,2±7.4	
Body weight (kg)	61,5±4.2	
Body Mass Index (BMI) Distribution		
BMI Category	**n**	**(%)**
Underweight (<18.5)	2	5,0
Normal (18.5-24.9)	30	75,0
Overweight (≥25)	8	20,0

According to the data presented in Table 1, the analysis of socio-hygienic indicators among patients with oral cavity cancer showed the following results: the average age of the patients was 56.2 ± 6.5 years, the average height — 165.2 ± 7.4 cm, and the average body weight — 61.5 ± 4.2 kg. The mean body mass index (BMI) was calculated to be 21.8 ± 2.3.

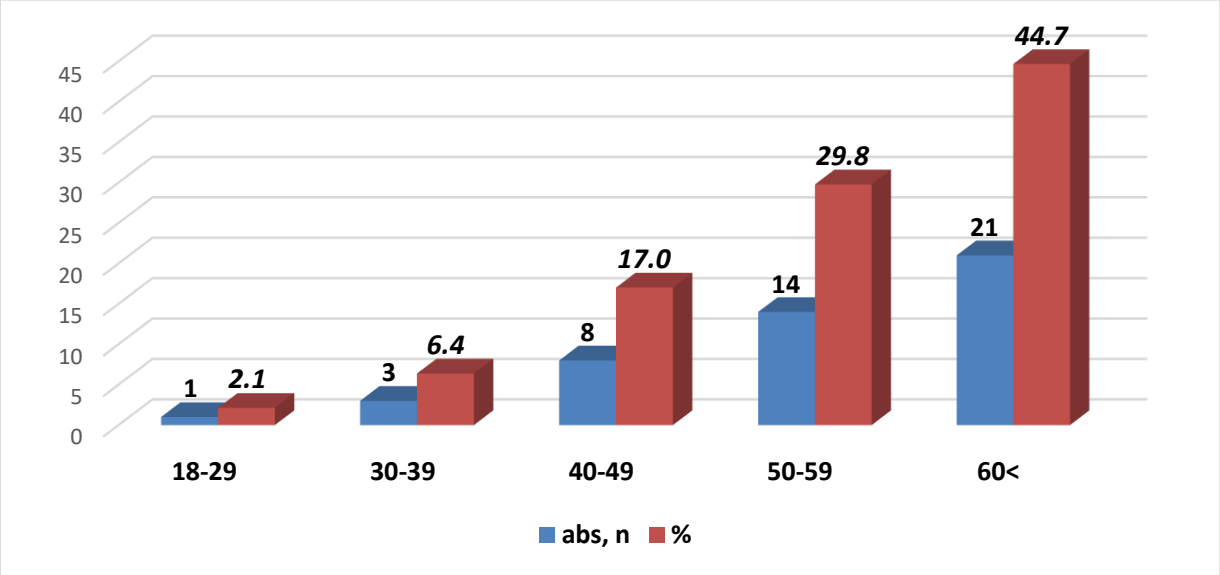

Figure 1. Distribution of Patients with Oral Cavity Cancer by Age Groups

Figure 1 provides a detailed overview of the age group distribution among patients with oral cavity cancer. The results show that 1 patient (2.1%) belonged to the 18–29-year age group, 3 patients (6.4%) to the 30–39-year group, 8 patients (17.0%) to the 40–49-year group, 14 patients (29.8%) to the 50–59-year group, and 21 patients (44.7%) were 60 years and older.

The gender distribution of patients with oral cavity cancer was as follows: male patients accounted for 52.5%, while female patients made up 47.5%.

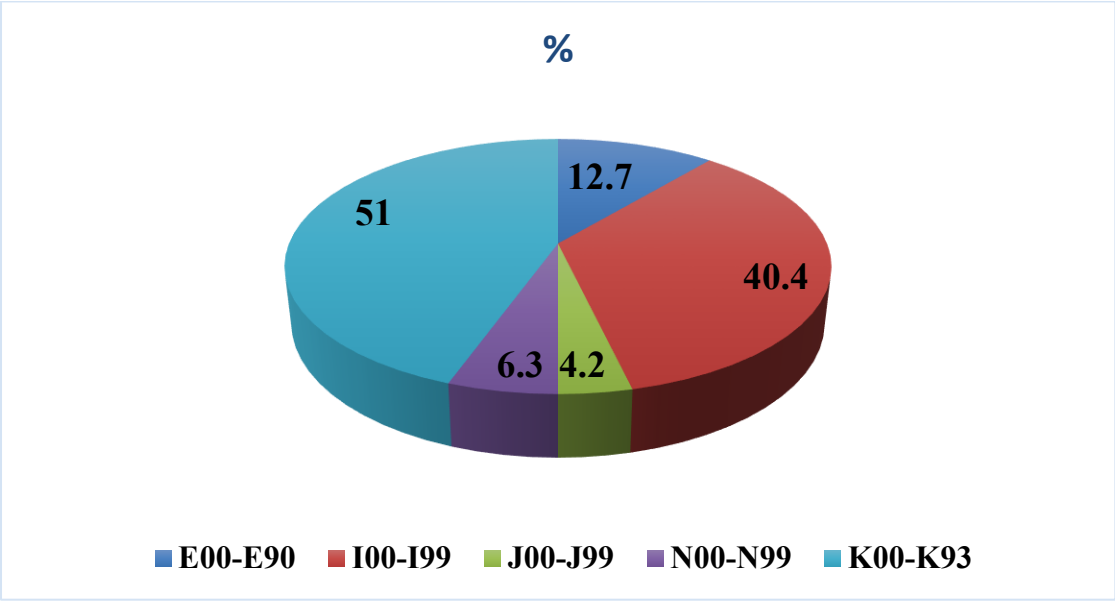

Figure 2. Hygienic Analysis of Comorbid Diseases in Patients with Oral Cavity Cancer, %

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The results of the assessment of comorbid diseases observed in patients diagnosed with oral cavity cancer are presented below. The comorbidity profile was analyzed according to the International Classification of Diseases (ICD-10). The findings showed that endocrine system diseases (E00–E90) were observed in 6 patients (12.7%), cardiovascular diseases (I00–I99) in 19 patients (40.4%), respiratory system diseases (J00–J99) in 2 patients (4.2%), urinary system diseases (N00–N99) in 3 patients (6.3%), and digestive system diseases (K00–K93) in 24 patients (51.0%).

Conclusion

In the evaluation of socio-hygienic conditions among patients diagnosed with oral cavity cancer (OCC), hygienic analysis of body condition indicators and the prevalence of comorbid diseases revealed the following: the average age of patients was 56.2 ± 6.5 years, average height — 165.2 ± 7.4 cm, average body weight — 61.5 ± 4.2 kg, and body mass index (BMI) — 21.8 ± 2.3. The patients were divided into five age groups for analysis. The study of comorbid diseases showed that K00–K93 diseases accounted for 51.0%, I00–I99 diseases for 40.4%, and E00–E90 diseases for 12.7%. The assessment of primary socio-hygienic indicators in patients diagnosed with oral cavity cancer provides an opportunity for the early detection of risk factors contributing to disease development and associated comorbidities.

References

1. Analysis of cancer incidence structure in the Republic of Uzbekistan. ResearchGate. https://www.researchgate.net/publication/355044075_Analysis_of_cancer_incidence_structure_in_the_Republic_of_Uzbekistan
2. Analysis of nutritional status and its influencing factors in patients with oral cancer. PMC. https://pmc.ncbi.nlm.nih.gov/articles/PMC12366936/
3. Assessing the Impact of Nutritional Status on the Quality of Life in Cancer Patients: A Cross-Sectional Multicenter Study in Romania. MDPI. https://www.mdpi.com/2072-6694/17/7/1128
4. Development and initial clinical application of an early enteral nutrition program for oral cancer patients. Nature. https://www.nature.com/articles/s41598-025-18600-y
5. Epidemiological aspects of the development of oral cancer in Uzbekistan. Annals of Oncology. https://www.annalsofoncology.org/article/S0923-7534%2823%2904931-1/fulltext
6. Oral functional impairment may cause malnutrition following oral cancer treatment in patients with oral cavity carcinoma other than oral tongue. Nature. https://www.nature.com/articles/s41598-022-19177-6
7. Ortikov B. B. Hygienic analysis of the anthropometric indicators of the covid-19 patients : дис. – 2022.
8. Ortiqov B. B. et al. KALIY ZAVODI ISHCHILARINING XAVF OMILLARINI GIGIYENIK TAHLIL QILISH //Медицинский журнал молодых ученых. – 2025. – №. 15 (09). – С. 181-185.
9. Prognostic Nutritional Index for Oral Cancer: A predictive parameter or a nutritional parameter? Science Direct. https://www.sciencedirect.com/science/article/pii/S2212555825000043
10. Uzbekistan - Global Cancer Observatory. https://gco.iarc.who.int/media/globocan/factsheets/populations/860-uzbekistan-fact-sheet.pdf.

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