ANALYSIS OF THE INCIDENCE OF MALIGNANT NEOPLASMS OF THE ORAL CAVITY IN THE CITY OF SHYMKENT

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ABSTRACT

Relevance: In Kazakhstan, an exponentially growing number of people live with bad habits (smoking, drinking alcohol, drug abuse, etc.), which are the main cause of oral cancer. It is necessary to inform the population about preventive measures and periodically conduct screening examinations.

The study aimed to analyze the incidence and mortality rates of the population from oral cancer for 2019-2022 in the city of Shymkent.

Methods: A retrospective study of patients with oral cancer in the oncology dispensary of Shymkent from 2019 to 2022 was conducted.

Results: The low percentage of early detection of this pathology in the city of Shymkent creates the need to intensify the work of the Shymkent city clinic on the early detection of oral cancer.

Conclusion: Within the guaranteed volume of medical care, we recommend that men aged 40 to 70 with bad habits not only in rural areas but also in cities undergo examination once a year for early detection of oral cancer.

Keywords: oral cancer, risk factors, oral thrush, prevention, morbidity.

Introduction: A growing number of people living in our country have harmful habits (smoking, alcohol consumption, drug use, etc.), which are the main cause of oral cancer. Oral cancer is often detected late due to its asymptomatic course [1]. Oral cancer is the second most common cause of death after cardiovascular disease. Its incidence is due to both qualitative and quantitative factors. Smokers and drug abusers have an 8.4 times higher incidence of oral cancer than those who are free of such habits [2]. Oral cancer is more common in countries such as India, Taiwan, Sri Lanka, Pakistan, and Bangladesh. It is particularly prevalent among low-income populations with poor living conditions and widely spread among people at risk factors such as environmental carcinogens, alcohol consumption, infectious agents, and smoking. Oropharyngeal cancer is one of the most dominant cancers globally. Tobacco and alcohol are the main risk factors for oral cancer. Smokeless tobacco also causes oral cancer, as confirmed by the International Agency for Research on Cancer [3, 4]. Other numerous risk factors include smoking, alcohol consumption, poor diet, HPV virus, excessive use of alcohol-based mouthwashes, poor oral hygiene, weakened immune system, and genetic factors. Oral cancer has a profound impact on the normal physiology of the oral cavity. Disturbance of normal physiology leads to malignant diseases such as leukoplakia, erythroplakia, submucosal fibrosis, cleft palate, and actinic keratosis, common in smokers.

The study aimed to analyze the incidence and mortality rates of the population from oral cancer for 2019-2022 in the city of Shymkent.

Materials and Methods: This retrospective study involved patients with oral cancer registered at the Shymkent Oncology Dispensary from 2019 to 2022. Data was taken from patients' medical records with their prior consent. All analyzed patients were newly or previously diagnosed with oral cancer.

The diagnosis in newly diagnosed patients was established:

a. when self-seeing a doctor

b. during medical check-ups

c. during screening

Among patients included in the study, we measured if:

- The diagnosis was morphologically verified

- The stage of the disease was established

Some patients were deregistered for oral cancer due to:

a. Non-verified diagnosis

b. Loss for follow-up.

c. A basal cell carcinoma was diagnosed

d. The patient's death for other diseases.

Patients registered in the past 4 years were 40 to 60 years old.

The study subjects included tongue, oral cavity, pharynx, and palate cancers.

The data was entered into Microsoft Excel and analyzed using the Statistical Package for Social Sciences (SPSS) version 16.

Results: The study included a total of 68 patients with oral cancer, aged 40 to 60 years, both sexes. Among the enrolled patients, 19 were diagnosed with oral cancer in 2019, 14 in 2020, 15 in 2021, and 20 in 2022.

The diagnosis in newly diagnosed patients was established:

In 2019:
a. When self-seeing a doctor – 15 people
p. During medical check-ups – 0
c. During screening – 0
In 2020:
a. When self-seeing a doctor – 13 people
p. During medical check-ups – 0
c. During screening – 0
In 2021:
a. When self-seeing a doctor – 9
p. During medical check-ups – 6
c. During screening – 1
In 2022:
a. When self-seeing a doctor – 5
p. During medical check-ups – 14
c. During screening – 0

The number of patients with laboratory-confirmed diagnoses among patients registered in the past 5 years amounted to 4 patients in 2019, 19 in 2020, 25 in 2021, and 4 in 2022. Tables 1-4 contain information about patients with oral cancer registered at the Shymkent Oncology Center in 2019-2022. The analysis was made in four general areas. The patients were divided into four large groups: patients registered in the relevant year, newly diagnosed patients, patients deregistered for oral cancer during the year, and patients registered with cancer in the past 5 years.

Table 1 – Characteristics of patients with oral cancer registered at the Shymkent Oncology Center in 2019

Indicator	Values		
Among patients registered that year	Patients with a previously established diagnosis		4
	Newly diagnosed patients		15
Among newly diagnosed patients	When self-seeing a doctor	Total	15
		Including 1-2 stages	8
	During medical check-ups	Total	
		Including 1-2 stages	
	During screening	Total	
		Including 1-2 stages	
Among patients deregistered that year	The diagnosis was morphologically verified		15
	The stage of cancer was established		
	Stage I		2
	Stage II		6
	Stage III		2
	Stage IV		5
	Total		90
	Patients deregistered for oral cancer during the year		86
	Non-verified diagnosis		
	Loss for follow-up.		1
	A basal cell carcinoma was diagnosed		
	Death for another disease		3
Patients on record for cancer for the previous 5 years			27

Table 2 – Characteristics of patients with oral cancer registered at the Shymkent Oncology Center for 2020

Indicator	Values		
Among patients registered that year	Patients with a previously established diagnosis		1
	Newly diagnosed patients		13
Among newly diagnosed patients	When self-seeing a doctor	Total	9
		Including 1-2 stages	9
	During medical check-ups	Total	
		Including 1-2 stages	
	During screening	Total	
		Including 1-2 stages	

Table 2 (continued)

Among patients deregistered that year	The diagnosis was morphologically verified	14
	The stage of cancer was established	
	Stage I	3
	Stage II	6
	Stage III	2
	Stage IV	2
	Total	9
	Patients deregistered for oral cancer during the year	3
	Non-verified diagnosis	
	Loss for follow-up.	
	A basal cell carcinoma was diagnosed	
	Death for another disease	6
Patients on record for cancer for the previous 5 years		19

Table 3 – Characteristics of patients with oral cancer registered at the Shymkent Oncology Center for 2021

Indicator	Values		
Among patients registered that year	Patients with a previously established diagnosis		
	Newly diagnosed patients		15
Among newly diagnosed patients	When self-seeing a doctor	Total	9
		Including 1-2 stages	5
	During medical check-ups	Total	6
		Including 1-2 stages	2
		Total	
	During screening	Including 1-2 stages	
Among patients deregistered that year	The diagnosis was morphologically verified		15
	The stage of cancer was established		
	Stage I		1
	Stage II		6
	Stage III		6
	Stage IV		
	Total		6
	Patients deregistered for oral cancer during the year		
	Non-verified diagnosis		
	Loss for follow-up.		
	A basal cell carcinoma was diagnosed		
	Death for another disease		6
Patients on record for cancer for the previous 5 years			25

Table 4 – Characteristics of patients with oral cancer registered at the Shymkent Oncology Center for 2022

Indicator	Values		
Among patients registered that year	Patients with a previously established diagnosis		
	Newly diagnosed patients		20
Among newly diagnosed patients	When self-seeing a doctor	Total	5
		Including 1-2 stages	2
	During medical check-ups	Total	14
		Including 1-2 stages	8
		Total	
	During screening	Including 1-2 stages	
Among patients deregistered that year	The diagnosis was morphologically verified		20
	The stage of cancer was established		
	Stage I		4
	Stage II		6
	Stage III		7
	Stage IV		3
	Total		5
	Patients deregistered for oral cancer during the year		3
	Non-verified diagnosis.		
	Loss for follow-up.		
	A basal cell carcinoma was diagnosed		
	Death for another disease		2
Patients on record for cancer for the previous 5 years			28

According to our findings, 19 patients were registered for oral cancer in 2019, 14 – in 2020, 15 – in 2021, and 20 – in 2022. The number of patients under monitoring has increased by 2022. Among newly diagnosed patients, 23 patients have been diagnosed in 2019, 11 – in 2020, 18 – in 2021, 15 – in 2022, and 20 – in 2023. Of those deregistered in the same year, 90 patients had been registered in 2019, 9 – in 2020, 6 – in 2021, and 5 – in 2022. Of the patients registered during the past 5 years, 27 were registered in 2019, 19 – in 2020, 25 – in 2021, and 28 – in 2022. We divided our identified indicators into subgroups. As shown in Tables 1-4, the highest number of registered patients, newly diagnosed patients, the patients on record for cancer during the past 5 years, and the lowest number of those deregistered during the same year were registered in 2022.

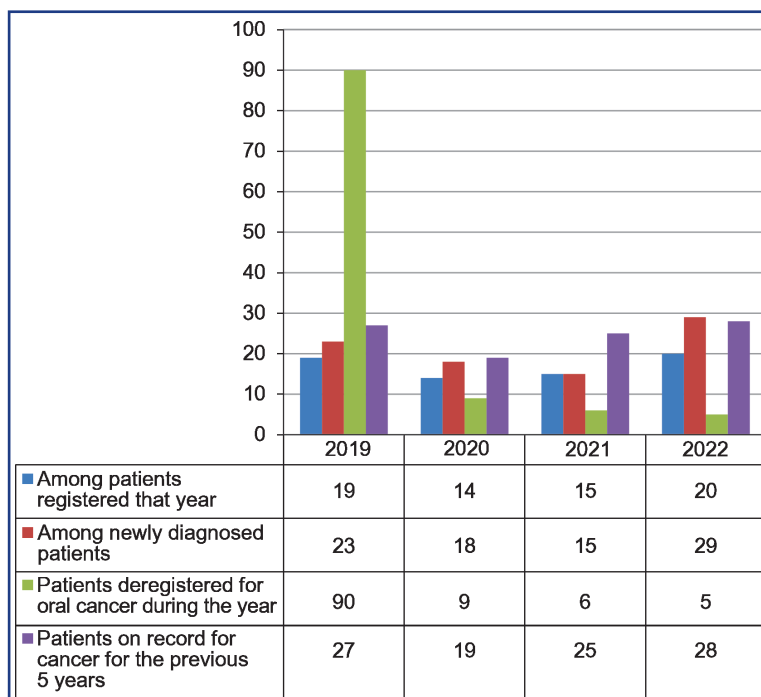|	2019	2020	2021	2022
■ Among patients registered that year	19	14	15	20
■ Among newly diagnosed patients	23	18	15	29
■ Patients deregistered for oral cancer during the year	90	9	6	5
■ Patients on record for cancer for the previous 5 years	27	19	25	28

Figure 1 – Cohorts of patients registered for oral cancer
at the Shymkent Oncology Center in 2019-2022

At early stages, oral cancer is painless and has no obvious onset, so patients seek medical help only when symptoms appear. Tumors usually manifest as white, red, or spotted lesions on the oral mucosa. The oral cavity is often affected first; later, the pathological process passes to the pharynx. Most oral lesions are in the oral cavity (oral mucosa, vestibular apparatus mucosa, and alveolar tumor).

We identified age-related risk factors for oral cancer. Out of 68 patients in this study, 40 (22.18%) were registered with oral cancer at the age of 40-50 years, and 28 (18.75%) – at the age of 50-60 years. Among people with harmful habits, 48 (75.5%) were smokers and 20 (24.5%) were drinkers.

Discussion: Our study did not reveal an overall increase in oral cancer prevalence. Oral cancer can be successfully treated only when detected at an early stage. Early detection of oral cancer is critical because it helps prescribe the right therapy on time, leading to better outcomes. The participants in this study only noticed oral cancer after the onset of clinical symptoms such as weight loss and others. Late detection and diagnosis are directly proportional to morbidity and mortality [6].

Oral cancer is difficult to detect at early stages due to its asymptomatic nature. Therefore, early detection is crucial to improving patient survival. When detected early, the survival rate in oral cancer reaches 80-90% [5, 6].

Delayed detection of the disease increases mortality. Although several treatment options are available, survival rates have not yet improved. Therefore, prevention is the main tool to reduce and control oral cancer mortality. Despite recent advances in treatment strategies, oral cancer survival rates remain low. Thus, the survival rate of patients with locally advanced (stage III or IV) OSCC is below 50% compared to patients with early-stage disease because cervical lymph node metastases are usually associated with poor prognosis in patients with oral cancer. Except for salivary gland pathology, most oral lesions in our study occurred after the age of 45, which confirms the findings of other studies [7, 8]. These could be due to the accumulation of bad habits and parafunctions in the oral cavity and iatrogenic factors. Removable prostheses, extensive sensations, iatrogenic factors, and habits are typical for older people [9, 10].

Despite advances in surgical techniques and adjuvant chemotherapy, the prognosis for patients with oral cancer remains poor. At the same time, five-year overall survival has slightly improved with concurrent postoperative chemotherapy (as shown by the studies of the Radiation Therapy and Oncology Group and the European Organization for Research and Treatment of Cancer). However, to further improve survival and other outcomes in patients with oral cancer, it is necessary to take into account the complex relationships between the patient, the tumor, and the underlying disease. Early detection of malignant tumors and other possible oral malignancies requires timely screening procedures [11].

Conclusion: The oral cavity is a place where various lesions of the mucous membrane occur. Their occurrence can be limited by early identification and elimination of harmful habits and iatrogenic factors, especially those that are prone to lesions, such as the oral and labial entrances. In conclusion, we recommend the following preventive measures:

1. Passing timely preventive check-ups.

2. Excluding all possible odontogenic and iatrogenic causes of oral mucosal lesions.

3. Identifying and eliminating bad habits.

4. Identifying and eliminating all causative factors before surgical treatment to reduce the risk of recurrence.

In addition, we recommend that rural and urban men aged 40 to 70 with harmful habits undergo an annual examination to detect oral cancer early within the state-funded guaranteed volume of medical care.

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АНДАТПА

ШЫМКЕНТ ҚАЛАСЫ БОЙЫНША АУЫЗ ҚУЫСЫНЫҢ ҚАТЕРЛІ ІСІКТЕРІМЕН СЫРҚАТТАНУШЫЛЫҚТЫ ТАЛДАУ

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Өзектілігі: Қазақстанда ауыз қуысының қатерлі ісігінің негізгі себебі болып табылатын зиянды әдеттермен (темекі шегу, алкогольді ішу, есірткі қолдану және т.б.) өмір сүретін адамдардың саны еселеп өсуде. Ауыз қуысы қатерлі ісігі ұзақ уақыт симптомсыз жүретіндіктен,өте кеш сатысында анықталады. Бұл жағдайды алдын алу мақсатында халықты профилактикалық шаралармен ақпараттандыру, скринингтік тексерістер уақытылы өткізу болып табылады.

Зерттеу мақсаты: Шымкент қаласы бойынша 2019-2022 жылдарға арналған ауыз қуысы қатерлі ісігінен халықтың аурушаңдық және өлім-жітім көрсеткіштерін талдау.

Әдістері: Шымкент қаласының онкологиялық диспансерінде 2019-2022 жж. аралығындағы ауыз қуысының қатерлі ісігі бар науқастарға ретроспективті зерттеу жүргізілді.

Нәтижелері: Шымкент қаласында осы патологияны ерте кезеңде анықтау пайызының төмендігі ауыз қуысы қатерлі ісігіктерін ерте анықтау бойынша Шымкент қаласындағы дәрігерлік амбулатория қызметінің жұмысын жандандыру қажеттілігін тудырады.

Қорытынды: Медициналық көмектің кепілдік берілген көлемі аясында тек ауылдық жерлерде ғана емес, қалаларда да зиянды әдеттері бар 40 жастан 70 жасқа дейінгі ерлер ауыз қуысы қатерлі ісігін ерте анықтау мақсатында жылына бір рет тексерілуден өтуді ұсынамыз.

Түйінді сөздер: ауыз қуысының қатерлі ісігі, қауіп факторлары, ауыз қуысы, профилактика, аурушаңдық.

АННОТАЦИЯ

АНАЛИЗ ЗАБОЛЕВАЕМОСТИ ЗЛОКАЧЕСТВЕННЫМИ ОПУХОЛЯМИ ПОЛОСТИ РТА В ГОРОДЕ ШЫМКЕНТЕ

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Актуальность: *В Казахстане растет в геометрической прогрессии количество людей, живущих с вредными привычками (курение, употребление алкоголя, употребление наркотических средств и т.д.), которые являются основной причиной рака полости рта. Необходимо информировать население о профилактических мерах, периодически проводить скрининговые обследования.*

Цель исследования *– проанализировать показатели заболеваемости и смертности населения от рака полости рта за 2019-2022 годы в городе Шымкенте.*

Методы: *Проведено ретроспективное исследование больных раком полости рта в онкологическом диспансере г. Шымкента в 2019-2022 гг.*

Результаты: *Низкий процент раннего выявления данной патологии в городе Шымкенте создает необходимость активизации работы поликлиники города Шымкента по раннему выявлению рака полости рта.*

Заключение: *В рамках гарантированного объема медицинской помощи мы рекомендуем мужчинам в возрасте от 40 до 70 лет с вредными привычками не только в сельской местности, но и в городах проходить обследование один раз в год с целью раннего выявления рак полости рта.*

Ключевые слова: *рак полости рта, факторы риска, молочница полости рта, профилактика, заболеваемость.*

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