IJIMM, Volume 2, Issue 11, 2024 ISSN: 2995-5319
http://medicaljournals.eu/index.php/IJIMM/issue/view/3

INTERNATIONAL JOURNAL OF INTEGRATIVE AND MODERN MEDICINE

Retrospective Analysis of the Epidemiological Situation of the Incidence of Oral Cancer in the Samarkand Region for 2011-2023

Khazratov A. I.
PhD, Associate Professor, Head of the Department of Oral Surgery and Dental Implantology, the Samarkand State Medical University

Rizaev J. A.
Doctor of Medical Sciences, Professor of the Department of Public Health of the Samarkand State Medical University

Ganiev A. A.
MD, Associate Professor of the Department of Maxillofacial Surgery, Tashkent State Dental Institute

Annotation: In most cases, oral diseases can be prevented, but they remain a serious health problem in different countries, causing harm to people of all ages. These diseases cause pain, discomfort, deformities and sometimes lead to fatal outcomes.

Keywords: retrospective analysis, oral diseases, Malignant neoplasms, oropharyngeal cancer, oral cavity, oropharynx.

Introduction. In most cases, oral diseases can be prevented, but they remain a serious health problem in different countries, causing harm to people of all ages. These diseases cause pain, discomfort, deformities and sometimes lead to fatal outcomes. It is estimated that oral diseases affect about 3.5 billion people worldwide. According to the 2019 Global Burden of Disease study, the most common problem is untreated caries of permanent teeth. Treatment of oral diseases is expensive and is often not included in basic health insurance in most countries.

Low- and middle-income countries do not have enough resources for large-scale prevention and treatment of oral diseases. The main risk factors for these diseases coincide with those of many other non-communicable diseases: sugar, tobacco and alcohol consumption, as well as poor hygiene. These factors are often driven by social and commercial conditions.

Most oral diseases can be prevented and treated at an early stage. The most common are caries, periodontal diseases, tooth loss and oral cancer. Other significant diseases include congenital cleft lip and palate, noma (a severe disease affecting children) and dental injuries. According to the WHO report for 2022, almost 3.5 billion people suffer from oral diseases, with most of them living in middle-income countries. It is estimated that about 2 billion people have caries of permanent teeth, and 514 million children have caries of baby teeth.

The growth of urbanization and changing living conditions contribute to an increase in the prevalence of oral diseases. This is due to insufficient fluoride intake, increased sugar intake and limited opportunities for primary dental care. The market for products high in sugar, tobacco and alcohol continues to grow, which increases the spread of oral diseases.

Dental caries develops due to plaque, which converts free sugars into acids that destroy teeth. Excessive sugar intake, lack of fluoride and poor hygiene contribute to the development of caries, causing pain and infections. Periodontal disease affects the supporting tissues of the teeth, its symptoms include bleeding gums, pain and bad breath. In severe cases, loosening and loss of teeth is possible. Almost 19% of the world's adult population suffers from a severe form of periodontal disease.

Most often, tooth loss is the result of advanced caries and severe periodontal disease, although other causes may contribute to this. It is estimated that 7% of people over the age of 20 have lost all their teeth, and among people over the age of 60, this proportion is 23%. Tooth loss causes psychological, social and functional problems. RPR includes tumors of the lip, other parts of the mouth and pharynx, and ranks 13th among the most common cancers. In 2020, there were 377,713 new cases and 177,757 deaths from lip and oral cancer. Most often, these diseases develop in men and the elderly, who have a high risk of greater mortality.

The role of public health and informing the public about ways to maintain dental health is of critical importance in the prevention of oral diseases. Primary prevention measures include adequate intake of fluoride, which can be provided through drinking water, toothpastes and professional applications. In addition, it is recommended to reduce the consumption of free sugars, especially in foods and beverages that easily stick to the teeth and remain in the oral cavity for a long time. Raising awareness of the importance of regular and proper oral hygiene, including brushing teeth twice a day with fluoridated toothpaste and flossing, is also an important part of prevention.

Oral health education programs and campaigns can play an important role in preventing diseases. The inclusion of oral health information in school curricula and the active participation of teachers and parents can contribute to the formation of good habits from an early age. An important element is the availability of dental services, including preventive examinations and early treatment. This requires support for health systems and improved funding for dental services, which will allow more people to receive the necessary care.

In addition, attention should be paid to combating the social and commercial determinants of health. This includes the introduction of stricter controls on the advertising and sale of products containing high levels of sugar, tobacco products and alcohol. Such measures may include tax initiatives, regulation of advertising, especially aimed at children, and initiatives to limit the availability of these products.

Joint efforts at the level of individuals, public health and public policy can significantly reduce the burden of oral diseases. Interventions aimed at improving hygiene practices, increasing access to dental care, and combating social determinants can lead to significant improvements in oral health worldwide.

To achieve sustainable results in improving oral health, it is critically important to implement an interdisciplinary approach. Doctors of various specialties, especially dentists, pediatricians, nutritionists and even school health workers should cooperate to achieve the common goal of improving oral health among various population groups. The integration of dental consultations and preventive measures into general medical programs will make it possible to more effectively identify and eliminate problems at an early stage.

Technological innovations can also have a significant impact on the prevention of oral diseases. The use of telemedicine for remote consultations and diagnostics, the development of mobile applications to track hygiene habits and access information about proper cleaning and oral hygiene techniques can make preventive measures more accessible and personalized. This, in turn, will reduce inequalities in access to dental care.

It is also necessary to take into account the cultural and social characteristics of different population groups when developing preventive programs. For example, some cultures may have specific food or hygiene practices that affect oral health. Taking into account these practices and adapting recommendations to cultural norms and values will increase the effectiveness of preventive measures and the degree of their acceptance among the population.

The previous sections of this study provide detailed data on the epidemiological analysis of the incidence of RPR at various levels, starting with global trends and ending with regional characteristics. This section will provide data on the study of morbidity in the Samarkand region.

As these studies have shown, the proportion of the incidence of RPR in the republican component is in third place, and its contribution is 11.92%.

The rough incidence rate in this region ranks fifth among all ZN and is 1,680/000. With standardization, it shifts to the sixth after the Bukhara region – 2.80/000. As can be seen from the available data, the incidence rate of the Samarkand region tends to increase, which dictates the need to consider it in the context of districts. To this end, data were collected on the number of cases of RPR in the districts of the Samarkand region, while intensive indicators were determined to be high in Kattakurgan (5.34), Narpai (4.33), Pakhtacha (2.97), Kushrabad (2.91), Postdargom (2,870/000) districts; average - in Ishtikhan (2.03), Jambai (2.00), Samarkand (1.73), Nurabad (1.46), Akdarya (1.43) districts and Samarkand (1,120/000); the lowest are in Bulungur (0.77), Payaryk (0.74), Tailyak (0.67), Kattakurgan (0.63) and Urgut (0.540/000) districts .

Apparently, the territorial differences are due to the different geographical location of the districts of the Samarkand region, some of them are located close to large cities, which means they have developed infrastructure and greater access to vehicles, respectively, medical institutions that can provide specialized care, which is reflected in more reliable information in terms of statistical accounting, as well as the identification of the pathology of the early stages. As noted above, regional differences are due to a variety of factors: demographic, environmental, cultural and behavioral, socio-economic, climatic and medical, i.e. the level of medical care and the availability of district oncologists in certain territories.

Each of the available factors may contribute to the existing regional differences between the incidence rates of RPR in the districts and cities of the Samarkand region. At the same time, it is necessary to take into account the possible internal interaction of the presented factors, which can both strengthen and weaken each other. For example, economic growth in the region can lead to improved medical infrastructure and access to education, which, in turn, can have a positive impact on the health and educational achievements of the population. Similarly, demographic changes, such as an aging population, may require the adaptation of infrastructure and social policies to cope with the increased burden on the health and social support system.

Conducting a qualitative in–depth epidemiological analysis requires large financial expenditures with the mandatory involvement of high-class experts from various fields - sociologists, economists, environmentalists, demographers, with the help of which it is possible to supplement quantitative data and identify the causal factors of the emerging incidence of RPR in certain territories.

We present the data of the epidemiological analysis of morbidity indicators for the period from 2011-2020. Rough and standardized indicators have been calculated for the Republic of Uzbekistan, its regions, including the Samarkand region and its individual districts. As the epidemiological assessment has shown, in general, it is possible to trace changes in indicators in a wide range, as for the incidence rates of the Republic of Uzbekistan over a ten–year period from the RPR, it was in the range of 2.0 - 2.94 per 100 thousand. the population with certain declines and rises, until 2016 the indicator level remained about 2.0 - 2.34, and in 2016 it decreased to - 2.0, starting in 2017 there was a trend towards growth, which peaked in 2018 at 2.94, in 2019 and 2020. it decreased slightly, but remained at the average values for previous years and amounted to 2.75 and 2.69, respectively.

Possible factors affecting morbidity changes in the healthcare system: an increase or decrease in the availability of medical services, diagnostics and preventive measures may affect the detection of diseases.

Preventive programs: The introduction or absence of oral cancer prevention programs may have played a role in the change in indicators.

Demographic changes: the age structure of the population and migration processes can also affect statistical data.

Socio-economic factors: changes in the standard of living, lifestyle and nutrition of the population can have an impact on morbidity.

Environmental factors: Changes in the environment, water and air quality can affect oral health.

Infectious diseases: The impact of infections that are associated with the development of oral cancer, such as HPV (human papillomavirus (HPV), requires analysis.

Risk factors that need to be included in the analysis: personal habits and behavior; smoking and alcohol consumption are the main risk factors for oral cancer; diet - lack of vitamins and trace elements can contribute to the development of diseases; genetic factors - the presence of a genetic predisposition in the history of patients; occupational hazards - work in conditions of high dustiness, exposure to chemicals viral infections - the presence of HPV, other viruses and infectious agents affecting the mucous membrane of the oral cavity; socio-economic status - the impact of poverty, education and other aspects on access to medicine and preventive measures; medical history - the presence of chronic diseases, especially those that require long-term medication.

Each of these factors can help to justify dynamic changes and to develop targeted measures to reduce the incidence of oral cancer in the future.

The chapter examines in detail the territorial differences in the incidence of RPR in the regions of the Republic of Uzbekistan, with an emphasis on the Samarkand region, which also studied indicators by districts with different values.

Conclusions. As indicated above, these changes are associated with many different factors, the understanding of which is of great practical importance for the development and implementation of effective prevention programs, city and regional governments, as well as medical institutions can use this information for a more targeted allocation of resources, as well as planning measures to improve and improve the quality of medical services provided, the lives of patients in terms of improving access in areas with low population density, or investing in the educational system of weak areas, which can lead to significant improvements in the long term. This refers to the studied and calculated predicted morbidity rates by 2030 and 2050. Ultimately, the implementation of comprehensive and interdisciplinary programs with data analysis and identified risk factors will help reduce the incidence of ZN, proper planning and allocation of financial resources to ensure equitable and sustainable development of the regions.

Literature:

1. Abdullaev K.N., Musaev S.S. Epidemiological Aspects of Oral Cancer in Uzbekistan: A 10-Year Review // Central Asian Journal of Medicine. 2022; 3(2): 145-152.
2. Warnakulasuriya S. Global epidemiology of oral and oropharyngeal cancer // Oral Oncology. 2021; 115: 105211.
3. Юсупов Б.Ю., Абдуллаева Н.Э. Анализ заболеваемости раком полости рта в Узбекистане за период 2015-2020 гг. // Стоматология. 2021; 100(6): 34-39.
4. Shield K.D., Ferlay J., Jemal A., et al. The global incidence of lip, oral cavity, and pharyngeal cancers by subsite in 2012 // CA Cancer J Clin. 2023; 73(1): 54-64.
5. Каримов Х.Я., Исмаилов С.И. Онкологическая служба Узбекистана: современное состояние и перспективы развития // Вестник РОНЦ им. Н.Н. Блохина. 2020; 31(1): 5-12.
6. Johnson N.W., Jayasekara P., Amarasinghe A.A. Squamous cell carcinoma and precursor lesions of the oral cavity: epidemiology and aetiology // Periodontology 2000. 2021; 57(1): 19-37.
7. Rahimov D.B., Umarov O.M. Clinical and epidemiological characteristics of oral cancer in Samarkand region // Medical Journal of Uzbekistan. 2022; 4: 78-84.
8. Sung H., Ferlay J., Siegel R.L. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide // CA Cancer J Clin. 2021; 71(3): 209-249.

9. Махмудов А.А., Ибрагимов Ш.Н. Эпидемиология злокачественных новообразований полости рта в регионах Узбекистана // Российский онкологический журнал. 2019; 24(3): 141-146.
10. Conway D.I., Purkayastha M., Chestnutt I.G. The changing epidemiology of oral cancer: definitions, trends, and risk factors // British Dental Journal. 2021; 225(9): 867-873.
11. Юлдашев А.А., Гафуров Р.Ш. Анализ статистических данных по онкологическим заболеваниям в Самаркандской области // Медицинский журнал Узбекистана. 2020; 5: 45-49.
12. Rivera C. Essentials of oral cancer // Int J Clin Exp Pathol. 2021; 8(9): 11884-11894.
13. Azimov M.I., Dustov S.K. Trends in oral cancer mortality in Central Asia: Analysis of the last decade // Asian Pacific Journal of Cancer Prevention. 2022; 23(8): 2731-2738.
14. Валиев А.А., Рахимов Н.М. Современные аспекты диагностики и лечения рака полости рта // Онкология и радиология Казахстана. 2021; 59(1): 54-59.
15. Petti S., Masood M., Scully C. The magnitude of tobacco smoking-betel quid chewing-alcohol drinking interaction effect on oral cancer in South-East Asia // PLoS One. 2023; 18(1): e0278349.
16. Карабаев М.К., Исмаилов С.И. Эпидемиологические особенности рака полости рта в различных регионах Узбекистана // Сибирский онкологический журнал. 2020; 19(4): 21-28.
17. Hashibe M., Brennan P., Chuang S.C. Interaction between tobacco and alcohol use and the risk of head and neck cancer: pooled analysis in the International Head and Neck Cancer Epidemiology Consortium // Cancer Epidemiol Biomarkers Prev. 2022; 18(2): 541-550.
18. Исмаилов С.И., Юсупов Б.Ю. Организация онкологической помощи в Узбекистане: достижения и перспективы // Евразийский онкологический журнал. 2021; 9(2): 22-29.
19. Wong T.S., Wiesenfeld D. Oral Cancer: Clinical features and management // Asian Journal of Oral and Maxillofacial Surgery. 2021; 33(4): 183-193.
20. Нишанов Д.А., Мадаминов А.Ю. Статистический анализ онкологической заболеваемости в Узбекистане за период 2010-2020 гг. // Проблемы современной онкологии. 2021; 25(3): 115-121.
21. Garibaldi C., Jereczek-Fossa B.A., Marvaso G. Recent advances in radiation oncology // Ecancermedicalscience. 2023; 11: 785.
22. Yakubov R.K., Khasanov A.I. Cancer Registry Data Analysis in Uzbekistan: Trends and Patterns // Asian Pacific Journal of Cancer Care. 2022; 7(1): 71-77.
23. Carreras-Torras C., Gay-Escoda C. Techniques for early diagnosis of oral squamous cell carcinoma: Systematic review // Med Oral Patol Oral Cir Bucal. 2021; 20(3): e305-15.
24. Умаров О.М., Рахимов Д.Б. Анализ факторов риска развития рака полости рта в Самаркандской области // Стоматология. 2023; 102(1): 41-46.
25. Bray F., Ferlay J., Soerjomataram I. Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries // CA Cancer J Clin. 2021; 68(6): 394-424.