



UDK:616.

OGIZ DEPARTMENT LANDSCAPE OF MICROORGANISMS IN ONCOLOGICAL  
DISEASES

N.T.Yodgorova

*Associate Professor of the Department of Microbiology, Virology, Immunology, Ph.D.*

[Yodgorova1977@bk.ru](mailto:Yodgorova1977@bk.ru) +998901676838

Z.SH.Bektemirova

*2nd year student of the medical faculty of TMA*

[bektemirovazarnigor15@gmail.com](mailto:bektemirovazarnigor15@gmail.com) +998900049610

B.R.Ibrohimov

*Tashkent Medical Academy 2nd year student of the medical faculty of TMA*

[ibahodir101@gmail.com](mailto:ibahodir101@gmail.com) +998901107036.

**Key words:** *oncological diseases, microbiota, bacteriological, pathogenic bacteria, hyperproliferation, light therapy.*

**Purpose of the study:** Assessment of oral microbiota in oncological diseases of the oral cavity.

**Materials and methods:** 20 patients with cancer in the oral cavity were selected from the surgical department No. 6 of the Republican Oncology Center: reconstructive, plastic surgery, head and neck tumors and onco-ophthalmology department. Their saliva was examined in the Bacteriological Laboratory of the TTA multidisciplinary clinic, and blood agar, VSA, endo, and Saburo media were used in the examination of patients. Antibiotic sensitivity was checked by disk diffusion method.

**Analysis and discussion of results.** 75% of patients are men, 25% are women. In 15 patients, 10 men and 5 women, bacteria close to the normal microflora of the oral cavity, and pathogenic bacteria in 5 men were detected. **Conclusion:** Oral microbiota composition and functionality are now considered to be associated with mutational changes in oral cancer. During the examination of patients with oncological diseases in the oral cavity, the bacteria detected in them are similar to normal bacteria, but they cannot be called completely normal (*Staf. aureus* 25%). The reason for this is explained by the fact that patients receive light therapy and take various powerful drugs. Such factors affect the normal microflora.

**Important.** The human oral cavity is a unique ecosystem for a variety of microorganisms that make up the permanent microflora that play an important role in human health and disease (1). Oral cancer is a type of head and neck cancer and is any cancerous tissue growth in the mouth. Head and neck cancer is the sixth most common form of cancer worldwide, and approximately 500,000 new cases of oral cavity and oropharyngeal cancer are diagnosed each year (2,3). It occurs as a result of mucosal damage, epithelial cell hyperproliferation, and inflammation. Oral microbiota includes representatives of more than 700 types of bacteria. Oral cancer accounts for 40% of head



and neck cancers. 90% of oral cancer is characterized by squamous cell carcinoma. Oral squamous cell carcinoma affects approximately 34,000 people each year in the United States. The average 5-year survival rate for oral cancer patients is 50%. About 95% of cancers occur in people over the age of 40. The average age at diagnosis is 60 years (4,9). Oral cancer is caused by tobacco and alcohol in 90% of cases. 800 million men and 200 million women use tobacco worldwide. More than 281,000 men, 198,000 women and unfortunately more than 150,000 children die of oral cavity cancer every year (5,8,15). 95% of men with oral cancer smoke and drink alcohol. In both smokers and drinkers, the disease is twice as severe as in non-drinkers, 5 times in comparison to non-smokers, and 35 times in comparison to non-smokers and non-drinkers (6, 13). More than 62% of women are children or spouses of fathers who smoke and drink alcohol. A large number of children with oral cancer are children of fathers who smoke and drink (7,14). In the treatment of this cancer, it is recommended to increase fruits and vegetables instead of tobacco and alcohol for the purpose of primary prevention. Eating fruits and vegetables helps prevent oral cancer by 35% (10,11,12).

the study: Assessment of oral microbiota in oncological diseases of the oral cavity.

**Test material and methods:** 48 patients with cancer in the oral cavity were selected from the surgical department No. 6 of the Republican Oncology Center: reconstructive, plastic surgery, head and neck tumors and onco-ophthalmology department. Their saliva was examined in the Bacteriological Laboratory of the TTA Multidisciplinary Clinic, and the samples of the patients were cultured in Blood agar, VSA, Endo, Saburo mediums, and we saw daily microbial colonies in their agar mediums. Disc-diffusion method was used to determine the antibiotic sensitivity of isolated colonies by inoculating them on neutral agar.

**Analysis and discussion of results.** In January 2023, the samples of 48 patients who applied to the surgical department of the Republican Oncology Center No. 6: reconstructive, plastic surgery, head and neck tumors and onco-ophthalmology were subjected to bacteriological examination, and the following results were obtained. The total number of patients is 48. 75% of them are men, 25% are women. Their average age is 63 years. 75% of patients decreased from normal, pathogenic bacteria were not detected. Pathogenic bacteria were detected in 25% of male patients. The results obtained from the patients showed that most of the bacteria found in their samples are similar to the bacteria of the normal microflora of the oral cavity, but these bacteria cannot be called completely normal. This is due to the fact that cancer patients take strong antibiotics, use radiation therapy and other factors, the sensitivity of these microorganisms to antibiotics has decreased. After isolation of the pure culture of these bacteria, their sensitivity to antibiotics was determined. We determined the sensitivity of pure cultures obtained from patient samples to the following antibiotics. The patients were found to be sensitive to the following antibiotics in relation to Staph.aureus. As can be seen in diagram-3, levofloxacin, cefoxitin, clindomycin are highly sensitive, glutamycin, amikacin, cefepime-sulbactam, doxycycline are moderately and low sensitive.

**CONCLUSION**



- In most cases, cancer in the oral cavity is caused by bad habits such as smoking, drinking alcohol, more than 75% among men.
- Taking into account the above points, the normal microflora in oncological diseases of the oral cavity is often reduced. Their changes are influenced by strong antibiotics taken, light therapy and other factors. Therefore, pathogenic bacteria were detected in the oral cavity in rare cases of oncological patients of the oral cavity.
- Staph.aureus was detected in 25% of patients. Staff. aureus became more sensitive to Levofloxacin, Cefoxitin, Clindomycin, cefepime-sulbactam. It showed moderate and low sensitivity to other antibiotics. The lowest sensitivity was determined to gatifloxacin, doxycycline, lincomycin.

#### USED OF LITERATURE:

1. Borovsky E.V. Therapeutic dentistry. – M.: Medicine, 1989. – 554 p.
2. Zelenova E. G. Zaslavskaya M. I. Salina E. V. Rasanov SP. Microflora of the oral cavity; norm and pathology: Textbook. Nizhny Novgorod : NGMA Publishing House. 2004-158s.
3. Yodgorova, N. T., Khalilov, Z. S., & Zhumamurodov, S. T. (2019). MODERN METHODS OF DIAGNOSTICS AND TREATMENT OF ROTAVIRAL INTESTINAL DISEASES. *Innova*, (2(15)), 6-13.
4. Zhumamurodov, S. T., & Yodgorova, N. T. (2018). Evaluation of the quality of PCR studies using the "dry tube" method (Doctoral dissertation, Tashkent Medical Academy).
5. Zhumamurodov, S. T., & Yodgorova, N. T. (2018). ASSESSMENT OF HIV RESISTANCE BY THE MOLECULAR GENETIC METHOD "DRY BLOOD DROP". Editorial board, 124.
6. BEHIND. Nuruzova, S.T. Zhumamurodov. species affiliation bacterial co-infections with covid-19. <http://repository.tma.uz/xmlui/handle/1/1631>
7. ZR Fayzullaeva, FSH Mamatmusaeva ONCOGEN VIRUSLARNING HUSUSYATLARI vestnik tma2022, sony 10, 43-46 <http://repository.tma.uz/xmlui/handle/1/5642>
8. Robustov T.G. Surgical dentistry. - M.: Medicine, 1990. - 571 p.
9. Amagasa T. Yamashiro, and N. Uzawa. 2011. "Oral Premalignant Lesions: From a Clinical Perspective." *International Journal of Clinical Oncology* 16(1): 5-14.
10. Allen K, Ford PJ, Farah CS. Oral mucosal screening and referral attitudes of Australian oral health therapists and dental hygienists in Queensland. *Int J Dent Hyg* 2015; 13; 206-212.
11. ZRFayzullayeva, NTYodgorova, F.Sh.Mamatmusaeva CANDIDA turi zamburug'larining antifungal preparatlarga sezgirligi va umumiy tavsifi infection, immunity va pharmacology 2022, 2 son, 150-154 bet <http://repository.tma.uz/xmlui/handle/1/2307>
12. IMPORTANT MICROORGANISMS IN UPPER RESPIRATORY TRACT INFECTIONS IN COVID-19 PATIENTS Safarov Sh.B., Yodgorova NT, Jumamurodov ST In the collection: Fundamental and applied scientific research: topical issues, achievements of



innovation. collection of articles of the LII International Scientific and Practical Conference: at 2 o'clock. Penza, 2022. P. 219-221. <https://elibrary.ru/item.asp?id=47563277>

13. Olson CM, Burda BU, Beil T, et al. Screening for Oral Cancer; A Targeted Evidence Update for the U.S. Preventive Services Task Force. Rockville (MD): Agency for Healthcare Research and Quality (US), <http://www.ncbi.nlm.gov/books/NBK132472/> (2013, accessed 23 March 2018).

14. Oral complications and cancer treatment - what the oral health team can do. The National Institute of Dental and Craniofacial Research (NIDCR). Campaign materials available from The National Oral Health Information Clearing House and Information Dissemination Service of NIDCR. 1999 (4372).

15. Karpiński T. M . Role of Oral Microbiota in Cancer Development// Microorganisms. — 2019. — 7 (1): 20. Doi: 10.3390/microorganisms7010020.