



FUNGAL DISEASES OF UPPER RESPIRATORY TRACT

Narbayev Z.

Narbayev K.

Andijan State Medical Institute.

<https://doi.org/10.5281/zenodo.14850015>

Annotation: in this scientific article classification of disability in diseases of the ENT organs, disability methods for determining the degree of temporary, permanent disability, causes of disability (general, occupational, occupational injury (injury, disability), military injury), disability groups, expert conclusion and job placement order, military ENT examination (assessment of the individual's health status and various determination of fitness for service in various branches of the military), forensic medical examination (of living persons, corpses inspection, evidentiary items and other necessary documents for investigative and judicial bodies must have skills in studying materials.

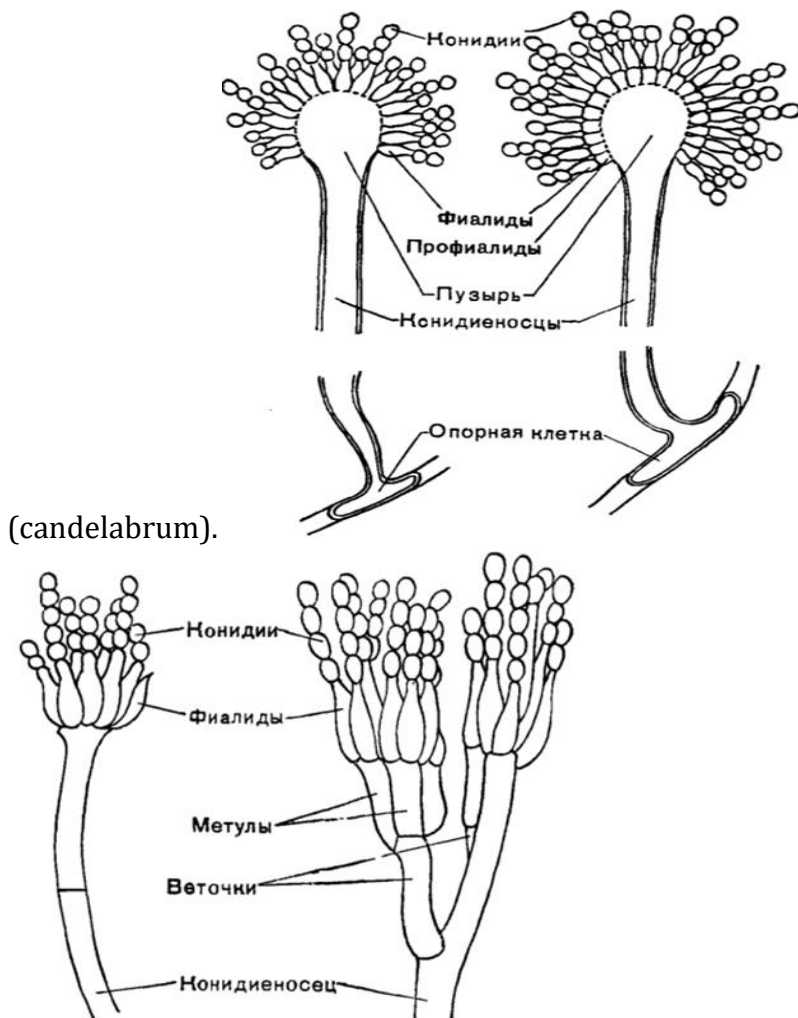
Keywords: injury, disability, military injury, disability groups, of living persons, corpses inspection, evidentiary.

Currently, while several serious infectious diseases (smallpox, plague, cholera, polio, etc.) have been completely eliminated in the world, the proportion of previously rare diseases is increasing, among which fungal diseases are among the first (V.Ya. Kunelskaya 1989). According to the data provided, the proportion of fungal diseases in humans worldwide has doubled over the past two decades. According to the World Health Organization, mortality from fungal diseases has increased tenfold over the past 15 years. A sharp increase in the incidence of diseases can only be attributed to the increase in the level of knowledge of medical workers in this area and the improvement of diagnostics. One of the main reasons is a sharp increase in the share of a number of factors leading to fungal diseases. Such factors include the use of various antibiotics, corticosteroids, radiation therapy, and cytostatic drugs in treatment practice, as well as the deterioration of the ecological environment. The negative impact of the external environment leads to a decrease in both local and general protective capabilities in humans. As a result of the influence of the above negative factors, the entry of fungi from outside or the development of conditionally pathogenic fungi in the human body leads to pathological manifestations and causes disease. Long-term ineffective use of antibiotics leads to a disruption of the balance of microflora in the human body, i.e., dysbacteriosis, and a decrease in bacterial flora creates conditions for the rapid development of fungi. The manifestation of fungal diseases in various organs and the increase in their types from year to year increased the attention of medical specialists to such diseases. The information and experience accumulated on this issue have begun to be studied more extensively not only by dermatovenerologists, but also by other specialists. The issues of the origin, clinical signs, diagnosis, and treatment of these diseases are also dealt with by trauma specialists, pediatricians, infectious disease specialists, otorhinolaryngologists, ophthalmologists, and others. In scientific articles and monographs, it is noted that the incidence of fungal diseases in otorhinolaryngological practice has increased several times in recent years, and in some cases, a life-threatening situation arises, which can even lead to

death. One of the main reasons for this is the increasing prevalence of fungal diseases in ENT organs, and secondly, the growing importance of studying, diagnosing, and treating these diseases.

Initial data on fungal diseases of the ENT organs in the literature (V.N. Frelich 1949, N.A. Preobrazhensky 1958, N.A. Lev 1968, Gill 1950, Osborn 1963, Martinson, Clark 1970) were presented only in the form of a description of a single phenomenon encountered in practice. As a result, otorhinolaryngologists do not have complete information about fungi and the diseases they cause, therefore, recently, attention to the study of these diseases has been increasing. In otorhinolaryngological practice, fundamental works devoted to the problem of fungal diseases, their origin, clinical course, diagnosis, treatment, and prevention were founded in the 80s of the last century by L.B. Daynyak and V.Ya. Kunelskaya. Subsequently, a number of major scientific works devoted to these issues were carried out (V.Ya.Kunelskaya 1972, 1989, V.Yu.Solodilov 1977, Zo Gvan Nam 1980, K.Kasimov 1980, I.A.Daykhes 1982, L.V.Stelmakh 1983, N.D.Chelidze 1986, A.I.Kryukov, co-author.2002, A.A.Blotsky 2014) and their results were published in the literature. In the conditions of Uzbekistan, to date, no comprehensive scientific work has been conducted on the study of fungal diseases of the ENT organs. Only R.D. Danilova (1972) defended a candidate's dissertation on the clinical course and treatment of fungal ear diseases, and K. Kasimov (1985) published a monograph "Mycosis of the pharynx" in co-authorship, dedicated to fungal diseases of the pharynx. In the literature, only information is provided about some cases encountered in practice dedicated to fungal diseases of ENT organs (Sh.K.Khuzhanov co-author 2010, B.I.Rakhimov, co-author 2010, A.Ch.Khushvakov 2011, K.R.Abdukadirov 2011, U.L.Lutfullaev 2015, Kh.K.Kasimov co-author 2015). Despite the fact that more than 30 years have passed since then, no fundamental work on this issue has been carried out in our country, and, naturally, not a single textbook or monograph for doctors has been published. Over the past period, a new generation of doctors has entered the field of medicine and continues to work in practice. It is self-evident that they do not have sufficient knowledge about fungal diseases of the ENT organs, there are no textbooks, monographs for obtaining information. If we take into account the fact that in recent years there has been an increase in fungal diseases of ENT organs, causing various serious complications, and the issue of their timely diagnosis and treatment is insufficient, then we have a big problem in this area.

Considering the foregoing, it is extremely necessary for otorhinolaryngologists working in medical practice to publish a textbook or a fundamental monograph on the diagnosis, clinical course, and effective treatment of fungal diseases of the ENT organs as quickly as possible, as well as on the use of modern antimycotic drugs. Based on this, we hope that the existing monograph will somewhat clarify the issue facing ENT doctors and will serve as a real guide not only for doctors but also for students of medical institutes, clinical residents, and masters. In nature, there are more than 100,000 species of fungi, among which are the causative agents of diseases of the ENT organs, which belong to a specific class. The vegetative body is called mycelium. The mycelium itself consists of colorless filaments or hyphae. These hyphae are composed of divided cells, hence they are called multicellular mycelium or septate. In some fungi, the ends of the mycelium are finger-like (Figure 1), branching out



(candelabrum).

Рис. 231. Строение конидиеносцев:
вверху — аспергилл; внизу — пеницилл.

А

Б

Figure 1. A - Appearance of conidia of Aspergillus and B - Penicillium fungi.

Fungal reproduction occurs through sexual and widespread pathways, simple division, and budding. For the fungus *Candida*, reproduction through the division of blastospores is characteristic.

When studying fungal diseases, it would be advisable to classify them into a single class, and only in this way can this issue be systematically analyzed. However, to this day, there are several forms of classes proposed by authors. They have their own shortcomings. We took into account that the proposed classification for use is simple and easy to understand. Such a classification was first proposed by A.M. Ariyevich (1963), who divided fungi into 4 groups, namely:

1. Keratomycosis
2. Epidermatomycosis
3. Trichomycosis
4. Deep systemic mycoses

1. Keratomycoses are found in the stratum corneum and hair and do not cause inflammation in the deeper layers of the skin.

2. Epidermomycoses are pathogens of this group, occurring in the stratum corneum and nails, and can also cause disease in deeper parts of the skin. This group also includes Candida and mold fungi that cause disease on the surface of skin and mucous membranes.

3. Trichomycoses - this group includes trichophytosis, favus, microsporia, which occur in the stratum corneum of the skin and cause disease throughout the skin and hair.

4. Deep systemic mycoses: this group includes cryptococcosis, coccidiomycosis, blastomycosis, histoplasmosis, rhinosporidiosis, chromomycosis, visceral candidiasis, and visceral mold. These fungi penetrate not only the skin but also deeper, causing serious diseases in muscles, bones, and internal organs. According to V.Ya. Kunelskaya (1989), it is advisable to divide fungi not by their location and the state of disease spread, but by their etiological factors.

Fungi that cause diseases of ENT organs are considered opportunistic pathogens and are found in nature in water, air, and soil. In a certain environment, these fungi, upon entering the human body, exhibit pathogenic properties. Endogenous and exogenous factors play an important role in the manifestation of the pathological properties of fungi. In the pathogenetic activity of fungi, the following conditions must exist, namely the adhesion of the fungus to the skin or mucous membrane, accumulation, and development of invasion, disrupting the integrity of the mucous membrane and skin. The next stage of the disease, considered a severe form, is when fungi enter the bloodstream and spread widely, forming secondary fungal foci in various parts of the body. The occurrence of any inflammatory process, as well as fungal inflammation, depends on the state of specific and nonspecific immunological defense capabilities. Factors contributing to the development of the disease include the presence of other chronic diseases in the body, immunological insufficiency, and hormonal and metabolic disorders. In addition, the fungal disease occurs in the form of secondary inflammation in tumors, tuberculosis, AIDS, and infectious diseases. In some cases, fungal inflammation exacerbates the course of the underlying disease.

In the development of the disease, due to damage caused by exogenous factors, the integrity of the skin and mucous membranes is disrupted, as a result of which the fungus enters (invasion) and causes inflammation. For fungal development, sufficient moisture, temperature (32-40°C), and oxygen are necessary. Knowledge of the above factors allows treating physicians to identify a group of patients who may develop secondary fungal diseases and, if necessary, prevent them. It is also important to consider that in some cases, long-term contact with fungi in healthy individuals can lead to secondary fungal diseases.

Review results:

Having studied the data presented in the literature and based on the data obtained from patients under our observation, we set ourselves the task of determining what factors contribute to the development of the disease and their role in the course of the disease. Our control consisted of 178 patients, 50 of whom had tonsillary candidiasis (TBC) with an acute diagnosis of angina and 128 patients with chronic tonsillitis with a mixture of fungal and bacterial microflora.

During patient monitoring, we studied the patterns of the origin of the fungal disease. Accordingly, most of the patients under our observation suffered from severe chronic infectious diseases, diseases of the endocrine system, diseases of the blood system, diseases of the gastrointestinal tract, in addition, many patients took large doses of ineffective antibiotics,

cytostatic and hormonal drugs for various reasons before reaching us. The aforementioned diseases and administered medications reduce specific and non-specific immunological capabilities, making the human body susceptible not only to pathogenic microflora but also to conditionally pathogenic microflora.

The primary cause of fungal inflammation of the tonsils is the presence of chronic inflammation in the glands, followed by the use of antibiotics for various reasons. In recent years, a number of new generations of antibiotics have appeared in therapeutic practice, as a result of which their use has increased significantly. Therefore, according to specialists studying the pathogenesis of candidiasis, the reason for the sharp increase in the disease is the excessive use of antibiotics.

When studying the medical histories of 50 patients with CKD under our observation, it was found that 28 patients received antibiotics for various reasons before the development of the disease. The interesting part of the presented information is that 3 patients received antibiotics for the treatment of chronic tonsillitis, and during the treatment process, the disease recurred as CKD. This situation indicates that the use of antibiotics led to dysbacteriosis, as a result of which conditions were created for the rapid development of *Candida* fungi in the tonsils. In 4 patients under our observation, cervical cancer developed after 4 days of applying the antibiotic ointment recommended by the dentist for periodontal treatment. We studied the timing of the development of cervical cancer during the use of antibiotics, where 10 patients were observed after 3-5 days, 9 patients - after 8-10 days, and 9 patients - after 11-21 days. Based on this, it can be concluded that the duration of action of antibiotics in the development of cervical cancer is not very long.

It is quite difficult to determine the role of *Candida* in the pathogenesis of chronic tonsillitis in the inflammatory process, the reason for which is, firstly, a decrease in the local protective capacity as a result of chronic inflammation and an increase in the pathogenic properties of the conditionally pathogenic fungus *Candida* in the mouth, or the creation of conditions for the development of the fungus due to the use of antibiotics. In our control, 30% of patients with chronic bacterial-fungal tonsillitis (CHTB) showed that they had been taking antibiotics for a long time as a result of treating various diseases until they reached us. Of these, 3 patients received 3 different antibiotics simultaneously, in these patients chronic tonsillitis was prolonged, recurred frequently, proceeded with severe intoxication, and treatment was quite difficult. Based on the data presented above, we came to the conclusion that antibiotics play a significant role in the development of fungal inflammation in chronic tonsillitis.

Compared with the data presented in the literature, the role of antibiotics in fungal inflammation of the tonsils is several times higher than the data we presented, in our opinion, firstly, the data presented belong to different authors, secondly, these studies were conducted in different conditions, and thirdly, microscopic and cultural studies are not the same everywhere.

According to U.U. Umarov and U.U. Muratov (1964), *Candida* fungi were detected in tonsil smears of 65 patients with chronic tonsillitis, 40 of whom were previously treated with antibiotics.

B. Doqun et.al (2010) when examining patients with chronic tonsillitis, which is prolonged and frequently recurring as angina, found *Candida* fungi in the tonsils in 44.7% of

cases, according to the authors, the main reason for this is that the patients had previously been treated several times with antibiotics.



Mesopharyngoscopic view of chronic bacterial-fungal tonsillitis.

The role of antibiotics in the development of fungal inflammation in the oral cavity can also be determined from the following data. According to V.I. Vasilyev (1971), fungi were detected in smears taken from the oral cavity in 5.5% of patients during periods when antibiotics were not yet used in the treatment process, and currently, during the period of sharp increase in antibiotic use, these fungi are detected in 80% of patients.

In conclusion, according to the literature data, CHD occurs several times more often in practice, and due to the variety of clinical manifestations, the diagnosis is not made in a timely manner, and these patients spend a lot of time undergoing various treatments as chronic laryngitis. Fungi causing XZYA include *Candida*, *Aspergillus*, *Geotrichum*, *Cephalosporium*, *Scopulariopsis*, *Penicillium*. Among them, candidiasis is the most common. In the diagnosis of the disease, a differential diagnosis should be made from inflammations such as laryngeal tuberculosis, tumors, and blastomatoses. CHD is also caused by rare and dangerous infections such as coccidiosis, histoplasmosis, blastomycosis, and cryptococcosis. Such inflammations are always accompanied by severe inflammation of the skin, mucous membranes, and internal organs. These manifestations of the disease are very rare, but it is necessary to have information about them

Used literature:

1. Баришевская Л.А.Использование физических факторов при лечении тонзиллофарингомикозов. /Матер.ХУ11 съезда оториноларингологов России.Санкт-Петербург 2006. Стр.158-159.
2. Блоцкий А.А. Грибковые заболевания ЛОР органов. М., 2014. 140 стр
- 3.Буркутбаева Т.Н. Современные противогрибковые препараты в комплексном лечении микозов ротоглотки. /Матер.ХУ11 съезда оториноларингологов России.Санкт-Петербург 2006. Стр.200-201.

4. Буркутбаева Т.Н., Умбеткулова С.Н., Уалиева Г.Н. Сочетанные инвазивные микозы верхних и нижних дыхательных путей, диагностика и лечения./Матер.ХIХ съезда оториноларингологов России.Санкт- Петербург 2016. Стр.414-415.
5. Дайняк Л.Б., Кунельская В.Я., Касимов К. Микозы глотки /Ташкент. "Медицина". 1985. 95 бет.
6. Дайняк Л.Б., Кунельская В.Я., Зо Гван Нам Клиника. Диагностика и лечение кандидозов миндалин. /Методич рекомендац. М.,1984. 13 стр.
7. Дайхес И.А. Особенности клиники рецидивирующих грибковых гайморитов. /Актуальные вопросы оториноларингологии- М., 1981. 53-56 бет./
8. Заболотный Д.И., Волосевич Л.И., Карась А.Ф. Роль грибковой микрофлоры в развитии полипозного риносинусита. / России микологларини I съезд материаллари. — М.: Национальная академия микологии, 2002. — С. 81-82.
9. Касимов Х.К.,Касимов К.,Норбаев З.К., Усманова Н.А. Некоторые вопросы кандидоза миндалин:клиника, диагностика и современные методы лечения./Журнал стоматология 2015. – N 3. – стр.155-158.