

ONCOLOGICAL DISEASES: ESOPHAGEAL CANCER

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Abstract: This article considers esophageal cancer as an urgent oncological problem in modern medicine. The main etiological factors, histological types, clinical symptoms, diagnostic methods and treatment approaches of the disease are analyzed. The differences between squamous cell carcinoma and adenocarcinoma, risk factors and modern diagnostic methods are highlighted. The prospects for immunotherapy and targeted therapy are also discussed. The article emphasizes the importance of early detection of esophageal cancer and preventive measures.

Keywords: Esophageal cancer, squamous cell carcinoma, adenocarcinoma, gastroesophageal reflux, Barrett's esophagus, diagnosis, treatment, immunotherapy, prevention.

INTRODUCTION

In modern medicine, oncological diseases are one of the most serious problems threatening the health of the population around the world. Every year, millions of people suffer from cancer, many of which are severe and end with high mortality. In particular, esophageal cancer stands out as a particularly severe and often late-diagnosed disease among gastrointestinal tract tumors. The esophagus is a tubular organ about 25–30 cm long that connects the oral cavity and stomach. Its main function is to transport food from the mouth to the stomach. Despite this seemingly simple function, the esophagus, due to its anatomical and functional features, is susceptible to various diseases, especially tumor processes. In particular, factors such as the deterioration of the ecological situation, the widespread use of harmful habits (smoking, alcohol consumption), malnutrition, and chronic gastroesophageal reflux contribute to the development of this disease. According to statistics, esophageal cancer is 3–4 times more common among men than women. This disease is epidemiologically distributed in different geographical regions, with relatively high rates in Central Asia, China, Iran and South Africa. Unfortunately, this type of cancer is almost asymptomatic in the early stages, and for this reason the disease is often detected late, which reduces the effectiveness of treatment and worsens the prognosis. Esophageal cancer differs from other gastrointestinal tumors in its histological forms, development mechanism, clinical symptoms, diagnostic methods and treatment approaches. It also has a high mortality rate, and in many cases is detected at a much more advanced stage due to the fact that patients do not seek medical attention in a timely manner. Therefore, early diagnosis of this disease, the use of effective treatment methods and, most importantly, the widespread promotion of preventive measures are one of the urgent issues of today's medicine. Esophageal cancer is morphologically divided into several histological types. Depending on which type of disease has developed, its clinical course, treatment methods and prognosis differ. The two main histological types are:

1. Squamous cell carcinoma

This type is one of the most common forms of esophageal cancer. Squamous cell carcinoma develops from squamous epithelial cells located in the mucous membrane of the esophagus. It is most often detected in the middle and upper parts of the esophagus.

Characteristics:

- Epidemiologically, it is more common in Asian, African and South American countries.
- Smoking and excessive alcohol consumption are the main risk factors.
- Frequent consumption of hot food and iodine deficiency can also cause the development of the disease.
- Often occurs in a multifocal form in many patients.

2. Adenocarcinoma

Adenocarcinoma is a type of cancer that arises from glandular epithelium and occurs mainly in the lower part of the esophagus, that is, in the gastroesophageal (gastroesophageal) region.

Characteristics:

- The number of adenocarcinoma is increasing in Western countries (USA, Canada, Europe).
- Gastroesophageal reflux (GERD) and Barrett's esophagus are the main etiological factors in its development.
- It is more common in men than in women.
- Obesity and poor eating habits increase the risk of the disease.
- This type is characterized by rapid growth and rapid spread to neighboring tissues and lymph nodes.

The following types of tumors can also be found in the esophagus in rare cases:

- Small cell carcinoma: Very aggressive and is usually diagnosed at a late stage.
- Leiomyosarcoma: Develops from smooth muscle tissue in the esophagus.
- Melanoma: Rarely occurs outside the skin, but can also occur in the esophagus.
- Lymphoma: Develops from lymphatic tissue and is rarely found in the esophagus.

Various risk factors, including smoking, excessive alcohol consumption, gastroesophageal reflux disease, poor diet, and environmental pollution, play an important role in the

development of this disease. The incidence of esophageal cancer is particularly high in developing countries, where there is insufficient attention to a healthy lifestyle and limited early diagnosis. During the discussion, the differences between the two main types of esophageal cancer - squamous cell carcinoma and adenocarcinoma - also deserve special attention. Squamous cell carcinoma usually occurs in the upper and middle sections, and is directly related to the consumption of alcohol and tobacco products. On the other hand, adenocarcinoma occurs in the lower sections, mainly as a complication of gastroesophageal reflux and Barrett's esophagus. These differences are important in clinical practice for making the correct diagnosis and creating an individual treatment plan. Modern methods such as endoscopy, biopsy and computed tomography play a crucial role in diagnosis. However, the lack of these technologies in developing regions leads to the late detection of the disease. As a result, most patients are provided with palliative care, which significantly reduces the expected life expectancy.

Conclusion

Esophageal cancer is a dangerous oncological disease characterized by high mortality, late detection and severe clinical course. The two main histological types of the disease, squamous cell carcinoma and adenocarcinoma, have their own etiology, development factors and treatment approaches. In particular, smoking, alcohol, hot food, GERD, Barrett's esophagus and malnutrition have been proven to be the main risk factors for this disease. Early detection of esophageal cancer is very important, because the effectiveness of treatment in the early stages is high. Modern diagnostic methods such as endoscopic examinations, biopsy, CT/MRI and PET-CT play an important role in the accurate assessment of the disease. Treatment is carried out through surgery, chemotherapy, radiotherapy or a combination of these, depending on the tumor and its stage. Also, modern approaches such as immunotherapy and targeted therapy may further improve the effectiveness of treating this disease in the future.

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