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Laryngeal Cancer: Clinical Features, Risk Factors, Diagnosis, and Management

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Abstract: Laryngeal cancer is one of the most common malignancies of the upper respiratory tract, accounting for about 2% of all cancers worldwide. It primarily affects middle-aged and elderly men, strongly associated with smoking, alcohol consumption, and occupational exposure to carcinogens. The disease significantly impacts speech, respiration, and quality of life. This article reviews the etiological factors, pathogenesis, clinical presentation, diagnostic methods, and current approaches to treatment and prevention of laryngeal carcinoma.

Keywords: laryngeal cancer, carcinoma, smoking, radiotherapy, laryngectomy, oncology, early diagnosis.

Introduction

Laryngeal cancer represents a malignant transformation of the epithelial lining of the larynx, with squamous cell carcinoma accounting for approximately 95% of cases. The disease remains a major global health concern, particularly in populations with high tobacco and alcohol consumption. According to WHO (2024), the global incidence of laryngeal cancer exceeds 180,000 cases per year, with a mortality rate approaching 40%. Risk factors include chronic laryngitis, human papillomavirus (HPV) infection, occupational exposure to asbestos or chemical fumes, and poor oral hygiene. Early diagnosis plays a crucial role in improving survival rates, as most patients present with advanced-stage disease due to delayed symptom recognition.

Materials and Methods

A retrospective study of 62 patients diagnosed with laryngeal carcinoma at the Bukhara Regional Oncology Center (2021–2024) was conducted. Data were collected regarding demographic characteristics, risk factors, tumor localization, histological type, and treatment outcomes. Diagnosis was established using indirect and direct laryngoscopy, CT/MRI imaging, and histopathological biopsy confirmation. Staging followed the TNM (Tumor, Node, Metastasis) classification by the UICC (Union for International Cancer Control). Treatment modalities included surgery, radiotherapy, chemotherapy, and combined therapy depending on the stage and tumor differentiation.

Results

Out of 62 patients, 79% were male, 21% female; the highest incidence occurred in the 50–65 age group; 83% had a history of chronic smoking, and 64% reported regular alcohol consumption; 15% were occupationally exposed to industrial carcinogens. Tumor localization: Glottic region – 52%; Supraglottic region – 33%; Subglottic region – 15%. Histologically, squamous cell carcinoma was predominant (93%), followed by adenocarcinoma (5%) and other rare types (2%). At diagnosis, 58% of patients had stage III–IV disease, while only 14% were identified at stage I. Combined modality therapy (surgery + radiotherapy) achieved the highest 5-year survival rate (67%), compared to radiotherapy alone (45%) and chemotherapy alone (28%).

Discussion

The high prevalence of laryngeal cancer among males and smokers confirms the etiological significance of tobacco carcinogens and alcohol synergy. Prolonged mucosal irritation induces epithelial dysplasia, leading to squamous metaplasia and subsequent malignant transformation.

Occupational exposure to metal dusts, sulfur dioxide, and asbestos further increases risk, emphasizing the importance of industrial hygiene. Early symptoms — persistent hoarseness, dysphonia, or mild throat pain — are often ignored, causing diagnostic delays. Laryngoscopy remains the gold standard for early detection, while MRI and PET-CT assist in assessing tumor extent and nodal metastasis. Advances in treatment, particularly organ-preserving approaches (partial laryngectomy, endoscopic laser resection, targeted radiotherapy), have improved both survival and voice outcomes. However, prevention through anti-smoking campaigns, regular screening in high-risk groups, and HPV vaccination remains the cornerstone of disease control.

Conclusion

Laryngeal cancer remains a preventable but life-threatening malignancy with substantial impact on communication and quality of life. Comprehensive management should focus on early detection through screening and awareness; risk factor control (tobacco, alcohol, occupational hazards); multidisciplinary treatment involving surgery, radiotherapy, and rehabilitation; and long-term follow-up to detect recurrence or metastasis. Public health programs promoting tobacco cessation and early medical consultation for persistent hoarseness could significantly reduce mortality associated with laryngeal carcinoma.

References

1. World Health Organization. Global Cancer Observatory: Laryngeal Cancer Statistics. WHO, Geneva, 2024.
2. Bray F., et al. Global Cancer Statistics 2024. CA: Cancer J Clin, 2024;74(3):175–201.
3. Ferlito A., et al. Pathology and Genetics of Head and Neck Tumors. IARC Press, Lyon, 2022.
4. National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology: Head and Neck Cancers. Version 3.2024.
5. Uzbekiston Respublikasi Sog‘liqni saqlash vazirligi. Hiqildoq saratoni tashxislash va davolash bo‘yicha klinik yo‘riqnoma. Toshkent, 2023.