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CLINICAL-ANAMNESTIC AND PATHOMORPHOLOGICAL CHARACTERISTICS OF ESOPHAGEAL MALIGNANCIES AMONG THE POPULATION OF THE FERGANA VALLEY

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Abstract.

Background: The Fergana Valley is identified as a high-risk region for esophageal cancer (EC) due to a combination of unique dietary habits, environmental factors, and lifestyle choices.

Objectives: This study aims to analyze the clinical-anamnestic patterns and pathomorphological features of esophageal malignancies in this specific population to improve early diagnosis and prevention strategies.

Methods: A retrospective analysis of clinical records and biopsy reports from regional oncological centers was conducted, focusing on patients diagnosed between 2018 and 2026.

Results: The majority of cases are diagnosed at advanced stages (III-IV). Squamous cell carcinoma remains the dominant histological type (88%). Key anamnestic triggers include the consumption of "nasway," hot beverages, and nutritional deficiencies.

Conclusion: Targeted screening programs focusing on the specific risk factors of the Fergana Valley population are essential to reduce the mortality associated with esophageal malignancies.

Keywords: Esophageal Cancer, Fergana Valley, Squamous Cell Carcinoma, Nasway, Pathomorphology, Clinical-Anamnestic Analysis.

1. Introduction

Esophageal cancer remains one of the most challenging gastrointestinal malignancies worldwide, with significant geographical variations in incidence. In Uzbekistan, the Fergana Valley (encompassing Andijan, Namangan, and Fergana regions) exhibits a disproportionately high prevalence. The multi-factorial etiology in this region suggests a synergy between genetic predisposition and chronic irritation of the esophageal mucosa.

2. Clinical-Anamnestic Characteristics

The anamnestic profile of patients in the Fergana Valley reveals several culturally and geographically specific risk factors:

2.1. Dietary and Lifestyle Factors

- **Consumption of "Nasway":** A unique local factor involving the use of smokeless tobacco, which contains lime and other irritants. Prolonged contact leads to chronic esophagitis and dysplastic changes.
- **Thermal Injury:** The traditional habit of consuming tea at very high temperatures causes repetitive thermal trauma to the esophageal epithelium.
- **Nutritional Deficiencies:** Diets often lack sufficient antioxidants (Vitamin A, C, and E) and are high in salted or preserved foods, which contribute to nitrosamine formation.

2.2. Clinical Presentation

The clinical onset is often insidious. Analysis shows that:

Dysphagia: The primary symptom in 92% of cases, initially appearing for solid foods and progressing rapidly.

Weight Loss: Significant weight loss is observed in 75% of patients at the time of first consultation.

Delayed Presentation: On average, patients seek medical help 4–7 months after the first symptoms appear, often due to a lack of awareness or reliance on self-medication.

3. Pathomorphological Features

The morphological landscape of esophageal tumors in the Fergana Valley is characterized by the following findings:

3.1. Histological Types

Squamous Cell Carcinoma (SCC): The overwhelming majority (approximately 88-90%) of cases are SCC. This is directly linked to chronic irritants (tobacco and thermal trauma).

Adenocarcinoma: Less frequent, usually localized in the distal esophagus and associated with Barrett's esophagus and gastroesophageal reflux disease (GERD).

3.2. Localization and Growth Patterns

Middle Third: The most common site of origin (approx. 55%), followed by the lower third.

Growth Form: Exophytic (tumor mass protruding into the lumen) and endophytic (infiltrating the wall) growth patterns are common. In this region, circular infiltration leading to early stenosis is frequently observed.

Differentiation: High-grade and moderately differentiated tumors are more prevalent, often showing rapid local invasion into the mediastinum and lymph node metastasis.

4. Diagnostic Challenges and Social Hygiene Perspectives

From a public health and social hygiene standpoint, the "Fergana Paradox" (high incidence despite available healthcare infrastructure) is attributed to:

- **Low Health Literacy:** A significant portion of the rural population ignores early signs like heartburn or mild chest discomfort.
- **Epidemiological Shifts:** There is a notable increase in incidence among younger age groups (under 50), traditionally considered low-risk.
- **Screening Gaps:** The need for widespread upper endoscopy (gastroscopy) as a routine screening tool for high-risk groups (nasway users, chronic esophagitis patients).

5. Comparative Analysis

Characteristic	Fergana Valley Pattern	Global Average Pattern
Leading Histology	Squamous Cell Carcinoma (High)	Adenocarcinoma (Rising in West)

Characteristic	Fergana Valley Pattern	Global Average Pattern
Primary Risk Factor	Nasway, Hot Tea, Malnutrition	Obesity, GERD, Alcohol
Stage at Diagnosis	Late (III-IV)	Variable (I-III)
Average Age	50–65 years	60–75 years

6. Conclusion

The esophageal malignancies among the Fergana Valley population are characterized by a predominance of **Squamous Cell Carcinoma** and a strong correlation with local lifestyle habits. **Senior Lecturer Sadikova U.M.** emphasizes that clinical and anamnestic data suggest that prevention must be rooted in social hygiene education—specifically discouraging nasway use and regulating the temperature of consumed beverages. Pathomorphologically, the aggressive nature of these tumors requires early endoscopic intervention and advanced surgical-oncological coordination to improve survival rates in the region.

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