MICROBIOLOGICAL AND INFLAMMATORY FEATURES OF CHRONIC PHARYNGITIS IN YOUNG ADULTS

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Relevance of the Study

Chronic pharyngitis remains one of the most widespread diseases in otorhinolaryngology and significantly affects the quality of life of young adults. Persistent inflammation of the pharyngeal mucosa contributes to recurrent respiratory infections, chronic discomfort, and reduced local immune defense. According to recent epidemiological studies, chronic inflammatory diseases of the upper respiratory tract affect approximately 20–25% of adults worldwide [1].

Bacterial colonization, smoking, environmental pollution, and immune dysfunction are considered the major etiological factors contributing to chronic pharyngeal inflammation. Long-term inflammatory activation may lead to structural mucosal changes and increased susceptibility to recurrent infections. Early identification of microbiological and inflammatory abnormalities is therefore essential for improving diagnostic and preventive strategies in ENT practice.

Objective

The aim of this study was to evaluate the microbiological and inflammatory characteristics of chronic pharyngitis and determine the relationship between bacterial colonization and clinical severity.

Materials and Methods

The study included 42 patients diagnosed with chronic pharyngitis who underwent examination at an otorhinolaryngology clinical department. The mean age of participants was 25.7 ± 6.2 years. Men accounted for 24 cases (57.1%), while women represented 18 cases (42.9%). Clinical evaluation included assessment of sore throat severity, pharyngeal hyperemia, mucosal edema, and frequency of recurrent respiratory symptoms. Laboratory investigations included complete blood count, C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), and microbiological throat swab analysis.

Microbiological cultures were performed to identify dominant pathogenic microorganisms. Statistical analysis was conducted using variation statistics and Pearson correlation analysis. Quantitative variables were expressed as mean ± standard deviation (M±SD). Statistical significance was accepted at $p < 0.05$.

Results

The study demonstrated significant inflammatory and microbiological alterations in patients with chronic pharyngitis. Persistent sore throat and mucosal irritation were observed in 78.6% of participants, while recurrent upper respiratory infections occurred in 61.9%. Elevated CRP levels were identified in 54.8% of patients with a mean value of 8.6 ± 2.4 mg/L. Increased ESR was observed in 47.6% of cases. Microbiological analysis revealed *Streptococcus pyogenes* colonization in 50% of patients, *Staphylococcus aureus* in 35.7%, and mixed bacterial flora in 28.6%.

Correlation analysis demonstrated a strong positive relationship between bacterial colonization intensity and recurrence frequency ($r = 0.71$; $p < 0.001$). Smoking was identified in 38.1% of participants and was associated with significantly higher inflammatory marker levels.

Men demonstrated slightly higher bacterial colonization rates, whereas women reported increased mucosal sensitivity and throat discomfort. Patients with recurrent infections more than four times annually showed significantly higher CRP levels and more pronounced pharyngeal edema.

Conclusion

Chronic pharyngitis is associated with significant inflammatory and microbiological disturbances that contribute to recurrent upper respiratory symptoms and impaired mucosal immunity. Elevated inflammatory markers and persistent bacterial colonization were identified as important indicators of disease severity. The findings demonstrate that early microbiological monitoring and anti-inflammatory management are essential for preventing progression and reducing recurrent complications in patients with chronic pharyngitis.

REFERENCES

1. Fokkens W.J., et al. European Position Paper on Rhinosinusitis and Nasal Polyps. *Rhinology Supplement*. 2020;29:1–464.
2. Brook I. The role of bacteria in chronic pharyngitis. *International Journal of Pediatric Otorhinolaryngology*. 2018;104:29–33.
3. Rosenfeld R.M., et al. Clinical practice guideline for upper respiratory infections. *Otolaryngology–Head and Neck Surgery*. 2015;152(2):S1–S39.
4. Cunningham M.W. Pathogenesis of streptococcal infections. *Clinical Microbiology Reviews*. 2000;13(3):470–511.