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COMPARATIVE STUDY OF ACUTE AND CHRONIC TONSILLITIS: CLINICAL AND MICROBIOLOGICAL ASPECTS

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Introduction

Tonsillitis, an inflammation of the palatine tonsils, represents a common condition affecting both children and adults, manifesting in acute and chronic forms.

Acute tonsillitis typically presents with sudden onset of sore throat, fever, dysphagia, and lymphadenopathy, often caused by viral or bacterial pathogens.

Chronic tonsillitis, in contrast, is characterized by persistent or recurrent symptoms, low-grade inflammation, halitosis, and lymphoid tissue hypertrophy, which may contribute to complications such as peritonsillar abscess or systemic infection. Differences in etiology, symptom severity, microbiological profile, and response to therapy between acute and chronic forms are clinically significant and influence management strategies. While acute tonsillitis often responds to short-term antibiotic therapy and supportive care, chronic tonsillitis may require prolonged antimicrobial treatment, immunomodulatory approaches, or surgical intervention such as tonsillectomy. Understanding the clinical and microbiological distinctions between acute and chronic tonsillitis is essential for accurate diagnosis, effective treatment planning, and prevention of complications.

Objective

The objective of this study is to compare acute and chronic tonsillitis in terms of causative microbial agents, clinical presentation, and treatment outcomes. The study aims to identify key differences that influence therapeutic strategies and to assess the effectiveness of medical and surgical interventions in managing both forms of tonsillar inflammation.

Materials and Methods

This study employed a comparative observational design involving patients diagnosed with acute or chronic tonsillitis in outpatient and hospital settings.

Inclusion criteria encompassed patients of all ages presenting with clinical features consistent with tonsillitis, confirmed by physical examination, throat swab cultures, and relevant laboratory investigations. Data collection included demographic information, symptom duration and severity, clinical signs such as tonsillar exudate, lymphadenopathy, fever, halitosis, and history of recurrent episodes. Microbiological analysis involved throat swab culture, bacterial identification, and antibiotic sensitivity testing to determine the prevalent pathogens in acute versus chronic cases.

Treatment modalities evaluated included empirical and targeted antibiotic therapy, anti-inflammatory medication, supportive care, and surgical interventions such as tonsillectomy.

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Outcome measures included symptom resolution, recurrence rate, microbiological eradication, and post-treatment complications. Comparative statistical analyses were conducted to identify significant differences between acute and chronic tonsillitis in terms of etiology, clinical features, and response to therapy.

Results

The study found distinct differences in clinical presentation and microbiological profiles between acute and chronic tonsillitis. Acute tonsillitis was most commonly associated with *Streptococcus pyogenes*, viral agents such as adenovirus, and occasionally *Staphylococcus aureus*.

Symptoms included sudden onset sore throat, fever, dysphagia, erythematous and exudative tonsils, and tender cervical lymphadenopathy. Chronic tonsillitis exhibited a more insidious course, with persistent throat discomfort, halitosis, mild dysphagia, and tonsillar hypertrophy.

Microbiological analysis of chronic cases revealed a higher prevalence of mixed flora, including *Staphylococcus aureus*, *Streptococcus viridans*, anaerobic bacteria, and biofilm-forming organisms, which may contribute to resistance and recurrent inflammation. Treatment outcomes indicated that acute tonsillitis responded effectively to short-term antibiotics, with symptom resolution in the majority of cases within 7–10 days. Chronic tonsillitis required longer or repeated courses of antibiotics, and in refractory cases, tonsillectomy was associated with definitive symptom relief and reduced recurrence. Post-treatment recurrence rates were significantly higher in chronic tonsillitis compared to acute cases, highlighting the need for tailored management strategies.

Discussion

The findings highlight the importance of differentiating acute and chronic tonsillitis based on clinical and microbiological characteristics. Acute tonsillitis, predominantly caused by *Streptococcus pyogenes*, responds well to standard antibiotic regimens and supportive care, emphasizing early diagnosis and treatment to prevent complications such as rheumatic fever or peritonsillar abscess. Chronic tonsillitis presents unique challenges due to polymicrobial infection, biofilm formation, and recurrent symptoms, often necessitating individualized treatment plans and consideration of surgical intervention. Recognition of halitosis, persistent tonsillar hypertrophy, and recurrent low-grade symptoms serves as key indicators of chronic tonsillitis. Microbiological profiling is crucial for targeted therapy, particularly in cases with resistant or mixed flora.

Preventive strategies, including hygiene measures, immunization, and early treatment of acute episodes, may reduce progression to chronic disease. The study underscores the need for a multidisciplinary approach involving otolaryngologists, microbiologists, and primary care providers to optimize patient outcomes and minimize recurrent infections.

Conclusion

Acute and chronic tonsillitis differ significantly in terms of causative agents, clinical manifestations, and treatment outcomes. Acute tonsillitis is typically caused by single pathogens and responds rapidly to standard antibiotic therapy, whereas chronic tonsillitis involves polymicrobial infection, recurrent symptoms, and often requires prolonged medical management or surgical intervention. Accurate differentiation between acute and chronic forms, supported by microbiological analysis, is essential for effective treatment and prevention of complications.

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Tailored therapeutic strategies, including appropriate antibiotic selection, supportive care, and timely consideration of tonsillectomy, improve patient outcomes and reduce recurrence.

Understanding these distinctions enhances clinical decision-making and contributes to optimized management of tonsillar infections in both pediatric and adult populations.

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