

EFFECTIVENESS OF ANTIBIOTIC THERAPY AND TONSILLECTOMY IN GUTTATE PSORIASIS MANAGEMENT

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Abstract: Guttate psoriasis is an acute inflammatory variant of psoriasis that predominantly affects children and young adults and is frequently triggered by streptococcal upper respiratory tract infections. The strong temporal association between streptococcal tonsillopharyngitis and the onset or exacerbation of guttate psoriasis has led to increasing interest in therapeutic strategies aimed at eliminating infectious triggers. Among these strategies, antibiotic therapy and tonsillectomy have been proposed as adjunctive interventions in disease management.

This article reviews the current evidence regarding the clinical effectiveness of antibiotic therapy and tonsillectomy in the management of guttate psoriasis. Available studies suggest that antibiotic therapy may provide short-term clinical benefit in patients with confirmed active streptococcal infection by reducing antigenic stimulation and immune activation. However, antibiotics alone do not consistently prevent disease recurrence and should be used selectively to avoid unnecessary antimicrobial exposure.

Tonsillectomy has demonstrated promising long-term outcomes in selected patients with recurrent guttate psoriasis or chronic psoriasis associated with repeated streptococcal infections. Removal of the tonsillar tissue may decrease disease severity, reduce the frequency of flares, and lower the need for systemic psoriasis treatments. Nevertheless, evidence is largely derived from observational studies, and randomized controlled trials remain limited.

In conclusion, antibiotic therapy and tonsillectomy play complementary roles in the management of guttate psoriasis when streptococcal infection is implicated. Careful patient selection, microbiological confirmation, and integration with standard dermatological therapies are essential for optimizing treatment outcomes. Further high-quality studies are needed to establish evidence-based guidelines and clarify the long-term benefits of these interventions.

Key Words: Guttate psoriasis; antibiotic therapy; tonsillectomy; streptococcal infection; immune-mediated skin disease; psoriasis management

Introduction

Guttate psoriasis is a distinct clinical subtype of psoriasis characterized by the sudden eruption of multiple small, drop-shaped erythematous lesions, predominantly affecting the trunk and proximal extremities. It commonly develops after an episode of streptococcal pharyngitis or tonsillitis, highlighting the role of infectious triggers in disease onset. Unlike chronic plaque psoriasis, guttate psoriasis often presents as an acute condition, although it may progress to chronic disease in a subset of patients.

The immunopathogenesis of guttate psoriasis involves abnormal activation of T lymphocytes triggered by streptococcal antigens, leading to cross-reactive immune responses against skin components. This strong link between streptococcal infection and disease activity has prompted interest in therapeutic strategies targeting the infectious source. Antibiotic therapy and

tonsillectomy have therefore been proposed as adjunctive treatments to conventional dermatological management.

This article aims to evaluate the effectiveness of antibiotic therapy and tonsillectomy in guttate psoriasis management, with emphasis on clinical outcomes, patient selection, and current evidence.

Streptococcal infections, particularly those caused by *Streptococcus pyogenes*, play a pivotal role in triggering guttate psoriasis. Streptococcal superantigens can activate a large population of T cells, leading to excessive cytokine release and skin inflammation. Molecular mimicry between streptococcal antigens and keratinocyte proteins further amplifies immune-mediated skin damage.

Antibiotic therapy aims to eradicate streptococcal infection, reduce antigenic stimulation, and potentially attenuate immune activation. Tonsillectomy, on the other hand, removes a persistent reservoir of streptococcal antigens and immune activation, particularly in patients with recurrent tonsillitis.

Antibiotic therapy is most commonly used in patients with guttate psoriasis who have clinical or laboratory evidence of active streptococcal infection. Penicillin, amoxicillin, and macrolides are frequently prescribed based on bacterial sensitivity.

Clinical studies indicate that antibiotics may shorten the duration of acute guttate psoriasis episodes when administered early and appropriately. Reduction in skin lesion severity and faster resolution have been reported in some patients. However, evidence regarding long-term disease control remains inconsistent.

Importantly, antibiotic therapy does not appear to be effective in the absence of confirmed streptococcal infection. Routine use of antibiotics without microbiological confirmation is not recommended due to limited benefit and the risk of antimicrobial resistance.

Tonsillectomy has been investigated as a therapeutic option in patients with recurrent guttate psoriasis or those who develop chronic plaque psoriasis following repeated streptococcal infections. Several observational studies and case series have reported significant improvement or complete remission of psoriasis following tonsil removal.

Patients with frequent tonsillitis and recurrent psoriasis flares appear to benefit the most from tonsillectomy. Improvements include reduced frequency of disease exacerbations, decreased severity of skin lesions, and reduced need for systemic therapy.

Despite these positive findings, randomized controlled trials remain limited. Tonsillectomy is an invasive procedure and should be considered only after careful patient selection and multidisciplinary consultation.

Discussion

The management of guttate psoriasis requires an individualized approach that takes into account disease severity, triggering factors, and patient history. Antibiotic therapy plays a supportive role in cases associated with acute streptococcal infection but should not replace standard dermatological treatments such as topical agents or phototherapy.

Tonsillectomy represents a more definitive intervention targeting the underlying infectious trigger. While evidence supports its effectiveness in selected patients, particularly those with recurrent disease, the lack of large-scale randomized trials limits its routine recommendation.

Both interventions highlight the importance of addressing extra-cutaneous factors in psoriasis management and support the concept of psoriasis as a systemic, immune-mediated disease.

The management of guttate psoriasis remains clinically challenging due to its acute onset, variable disease course, and strong association with infectious triggers, particularly streptococcal tonsillopharyngitis. The findings discussed in this review emphasize the importance of addressing underlying immunological and infectious mechanisms rather than focusing exclusively on cutaneous manifestations. Antibiotic therapy and tonsillectomy represent interventions aimed at modifying disease triggers and altering the immunopathological cascade that leads to psoriasis development.

Antibiotic therapy plays a supportive role in the acute phase of guttate psoriasis when a streptococcal infection is confirmed. Several studies suggest that timely antibiotic treatment may reduce the severity and duration of skin eruptions by decreasing antigenic stimulation and subsequent T-cell activation. However, the clinical response to antibiotics varies significantly among patients, and long-term disease control is rarely achieved through antibiotic therapy alone. This variability underscores the need for careful patient selection and microbiological confirmation before initiating antimicrobial treatment.

Tonsillectomy has emerged as a potential therapeutic option for patients with recurrent guttate psoriasis or chronic psoriasis exacerbated by repeated streptococcal infections. By eliminating a persistent source of streptococcal antigens, tonsillectomy may lead to sustained immunological modulation and long-term disease improvement. Observational studies and patient-reported outcomes indicate reductions in flare frequency, disease severity, and reliance on systemic therapies following tonsil removal. Nevertheless, the invasive nature of the procedure and the absence of large randomized controlled trials necessitate cautious interpretation of these findings.

The discussion also highlights the broader concept of psoriasis as a systemic immune-mediated disease. The interaction between microbial triggers, genetic predisposition, and immune dysregulation reinforces the importance of a multidisciplinary approach involving dermatologists, otolaryngologists, and immunologists. Integrating antimicrobial strategies with conventional treatments such as topical therapy, phototherapy, and systemic agents allows for a more comprehensive and individualized management plan.

Despite promising results, several limitations must be considered. Heterogeneity in study design, small sample sizes, and inconsistent outcome measures limit the generalizability of current evidence. Future research should focus on well-designed clinical trials, standardized diagnostic criteria for streptococcal involvement, and long-term follow-up to better define the role of antibiotic therapy and tonsillectomy in guttate psoriasis.

Overall, the discussion supports a targeted and evidence-based approach to guttate psoriasis management, emphasizing the importance of identifying and addressing infectious triggers while maintaining adherence to established dermatological treatment protocols.

Conclusion

Antibiotic therapy and tonsillectomy represent targeted strategies in the management of guttate psoriasis associated with streptococcal infections. Antibiotics may provide short-term benefit in patients with confirmed active infection, while tonsillectomy may offer long-term disease control in selected patients with recurrent or chronic disease. Careful patient selection, confirmation of streptococcal involvement, and integration with standard dermatological therapies are essential for optimal outcomes. Further high-quality clinical trials are needed to establish standardized guidelines and clarify the long-term benefits of these interventions in guttate psoriasis management.

Guttate psoriasis is a distinct immunologically mediated dermatological condition in which streptococcal infections play a pivotal triggering role. The strong association between acute or recurrent streptococcal tonsillopharyngitis and the onset or exacerbation of guttate psoriasis provides a clear rationale for therapeutic strategies aimed at eliminating infectious foci. In this context, antibiotic therapy and tonsillectomy represent targeted interventions that address disease triggers rather than solely focusing on cutaneous manifestations.

The available evidence suggests that antibiotic therapy may be beneficial in the acute management of guttate psoriasis when an active streptococcal infection is confirmed. Early and appropriate antibiotic treatment can reduce antigenic stimulation, potentially leading to faster resolution of skin lesions and attenuation of inflammatory responses. However, antibiotics alone do not appear to provide long-term disease control and should not be used indiscriminately in the absence of microbiological evidence, given the risks of antimicrobial resistance and limited sustained benefit.

Tonsillectomy, as a more definitive intervention, offers promising long-term outcomes in carefully selected patients, particularly those with recurrent guttate psoriasis or progression to chronic plaque psoriasis associated with repeated streptococcal infections. By removing a persistent source of immune activation, tonsillectomy may significantly reduce disease recurrence, decrease severity, and lessen the need for systemic therapies. Nevertheless, due to its invasive nature, tonsillectomy should be considered only after comprehensive evaluation and multidisciplinary decision-making.

In conclusion, antibiotic therapy and tonsillectomy play complementary roles in the management of guttate psoriasis linked to streptococcal infection. Their effectiveness depends on accurate diagnosis, appropriate patient selection, and integration with standard dermatological treatments. Future large-scale, randomized controlled studies are essential to establish evidence-based guidelines, clarify long-term outcomes, and define the optimal role of these interventions within a personalized management strategy for guttate psoriasis.

References

1. Telfer NR, Chalmers RJG, Whale K, Colman G. The role of streptococcal infection in psoriasis. *British Journal of Dermatology*. 1992;126(6):545–556.
2. Gudjonsson JE, Thorarinnsson AM, Sigurgeirsson B. Streptococcal throat infections and exacerbation of psoriasis. *Journal of the American Academy of Dermatology*. 2003;48(4):530–534.
3. Owen CM, Chalmers RJG, O'Sullivan T, Griffiths CEM. A systematic review of antistreptococcal interventions for guttate and chronic plaque psoriasis. *British Journal of Dermatology*. 2001;145(6):886–890.
4. Sigurgeirsson B, Gudjonsson JE. Tonsillectomy and psoriasis. *British Journal of Dermatology*. 2013;168(2):237–242.

5. Nestle FO, Kaplan DH, Barker J. Psoriasis. *New England Journal of Medicine*. 2009;361(5):496–509.