

## CASE REPORT

# Dermatologic Manifestation of Streptococcal Infection: Tonsillectomy as a Treatment for Guttate Psoriasis

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## ABSTRACT

Psoriasis is a chronic dermatologic inflammatory disease characterized by scaly patches. Guttate psoriasis is characterized by numerous erythematous lesions measuring from 1 to 5 mm in diameter and most commonly found along the extremities and trunk. This type of psoriasis has been closely linked with preceding or concurrent streptococcal infections. There have been few studies demonstrating the role of tonsillectomy as a treatment option for guttate psoriasis. Adding to the literature of previously reported cases, we describe a case of a 28-year-old male with recurrent episodes of guttate psoriasis treated with tonsillectomy.

**Keywords:** Guttate psoriasis, Streptococcal, Tonsillectomy.

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## INTRODUCTION

Psoriasis is a chronic dermatologic disorder that affects 1 to 3% of patients worldwide. The disease process is thought to be immune-mediated and inflammatory in nature. There are five subtypes of psoriasis: Plaque, guttate, inverse, pustular and erythrodermic.<sup>1</sup> There have been many triggers and causative agents of psoriasis. One strong link is psoriasis preceded by an upper respiratory infection or sore throat, specifically with a group A streptococcal infection.<sup>2</sup>

This correlation is most evident between streptococcal pharyngitis and guttate psoriasis. Guttate psoriasis is characterized by numerous erythematous lesions measuring from 1 to 5 mm in diameter and most commonly found along the extremities and trunk. Guttate psoriasis is most commonly seen in adolescents

and patients under age 30. Many patients with guttate psoriasis have an elevated antistreptolysin O or streptozyme titer and outbreaks are commonly preceded by an upper respiratory infection.<sup>1</sup>

## CASE REPORT

A 28-year-old male presented to his otolaryngologist for evaluation of tonsillar hypertrophy and recurrent tonsillitis. The patient had been being treated with antibiotics for these episodes of recurrent tonsillitis. Of note, the patient was also concurrently being treated with topical steroid creams for recurrent acute onset exacerbation of guttate psoriasis by his dermatologist. On a monthly basis, the patient would have acute onset eruptions of erythematous lesions along his upper extremities and trunk, usually preceded by an episode of tonsillitis.

Physical examination revealed numerous erythematous lesions approximately 3 mm in diameter along his left and right upper extremities (Fig. 1). On oropharyngeal examination, the patient was noted to have 2+ cryptic tonsils. The patient underwent routine tonsillectomy for recurrent tonsillitis. The postoperative course was uneventful and pathology revealed hyperplastic lymphoid tissue. Of note on routine follow-up at 1 and 2 months after surgery, the patient had resolution of recurrent tonsillitis as well as acute episodes of guttate psoriasis. One can appreciate the almost complete resolution of the erythematous lesions in Figure 2.



**Fig. 1:** Small discrete papules and plaques of guttate psoriasis along the right upper extremity before tonsillectomy

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**Fig. 2:** Almost complete resolution of guttate psoriasis papules along the right upper extremity 2 months status post-tonsillectomy

## DISCUSSION

The literature describing the role of tonsillectomy for the treatment of guttate psoriasis is limited and not well-established. There have been many studies and reviews describing the role of tonsillectomy in patients with plaque psoriasis and palmoplantar pustulosis yet the data is scarce for guttate psoriasis.<sup>3</sup>

A Cochrane review aimed to analyze the evidence for antibiotics and tonsillectomy for the management of guttate and chronic plaque psoriasis. The review, however, only had one trial meet its selection criteria and demonstrated no strong evidence that either antibiotics or tonsillectomy are beneficial in the treatment of guttate or chronic plaque psoriasis.<sup>4</sup>

While there are no randomized trials of tonsillectomy for the treatment of guttate psoriasis, there are several case reports. McMillin et al retrospectively reported two cases of children with recurrent guttate psoriasis and tonsillitis treated with tonsillectomy. These patients were cured of psoriasis episodes after 16 months of outpatient follow-up.<sup>5</sup> Furthermore, Hone et al investigated 13 patients with psoriasis treated with tonsillectomy. Of these 13 patients, six had guttate psoriasis, with resolution

of psoriasis outbreaks in five out of six patients status post-tonsillectomy.<sup>6</sup>

Our case report of the role of tonsillectomy in the treatment of guttate psoriasis supports the previously published data. The most common indications for tonsillectomy are treatment of recurrent tonsillitis and tonsillar hypertrophy causing sleep disordered breathing and obstructive sleep apnea. This case report and literature review demonstrates a potentially important role for tonsillectomy as a potential treatment of guttate psoriasis. Additional prospective studies, preferably randomized controlled trials with larger numbers of patients, are needed to strengthen the level of evidence for tonsillectomy for the treatment of guttate psoriasis.

## CONCLUSION

Guttate psoriasis has been associated with recurrent tonsillitis. The data supporting the role of tonsillectomy for guttate psoriasis is limited and retrospective in nature. Our case report strengthens previously published data on the role of tonsillectomy for the treatment of guttate psoriasis, but further prospective study is needed.

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