

Bilateral Peritonsillar Abscess: A Systematic Review of Tonsillar Grading and Leukocyte Profiles

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Abstract:

Background: Bilateral peritonsillar abscess (BPTA) is a rare deep neck infection that may be underrecognized because its symmetric oropharyngeal presentation can obscure the classic features typically associated with unilateral disease.

Objective: This review aimed to systematically characterize tonsillar grading patterns and leukocyte profiles in patients with BPTA.

Methods: A systematic review was conducted in accordance with PRISMA 2020. Searches were performed in PubMed, Scopus, Embase, OpenAlex, and Google Scholar for studies published between January 2016 and December 2025. Eligible studies included patients with BPTA and reported both tonsillar grading and leukocyte count data. Methodological quality was appraised using Joanna Briggs Institute critical appraisal tools. Because of the rarity of the condition and the limited number of eligible cases, the findings were synthesized using a descriptive approach.

Results: Nine studies comprising 10 patients met the inclusion criteria. Advanced bilateral tonsillar enlargement was the dominant finding, with T4–T4 grading reported in 50% of cases, followed by T3–T3 in 20%, and T3–T4, T2–T4, and T2–T2 in 10% each. The mean leukocyte count was $16.98 \times 10^9/L$, ranging from 9.60 to $22.30 \times 10^9/L$. Leukocytosis was identified in 90% of patients.

Conclusion: BPTA is usually associated with marked bilateral tonsillar enlargement and leukocytosis. Tonsillar grading and leukocyte count may offer complementary clinical information by reflecting local anatomic involvement and systemic inflammatory response. However, the current evidence remains limited, and larger multicenter studies are needed to clarify their diagnostic and prognostic value.

Keywords:

Bilateral peritonsillar abscess, brodsky classification, leukocytosis, leukocyte count, tonsillar grading.