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# Peritonsillar Abscess

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**ABSTRACT**

Peritonsillar abscess (PTA) is the most common deep neck space infection, predominantly affecting adolescents and young adults. This condition represents a suppurative complication of acute tonsillitis or pharyngitis, characterized by pus accumulation between the tonsillar capsule and the superior pharyngeal constrictor muscle. Despite advances in antibiotic therapy, PTA remains a significant clinical entity with potential for life-threatening complications if inadequately managed. This article provides a comprehensive overview of peritonsillar abscess, encompassing its etiology, epidemiology, pathophysiology, clinical manifestations, diagnostic approaches, and evidence-based management strategies. This study employed a qualitative comprehensive literature review method. Data were collected through systematic searching of electronic databases including PubMed, Scopus, and Google Scholar for articles published between 2010 and 2024. Additionally, retrospective data from Sanglah General Hospital Denpasar (2010–2017) were analyzed to provide Indonesian epidemiological context. The annual incidence of PTA approximates 30 cases per 100,000 population, with peak incidence in individuals aged 15–40 years. The condition is predominantly polymicrobial, with Group A Streptococcus recovered from approximately 20% of cases. Analysis of 38 Indonesian patients revealed male predominance (65.78%), mean age of 38.76 years, and Streptococcus viridans as the most commonly isolated organism (63.16%). Clinical presentation is characterized by unilateral sore throat, trismus, muffled "hot potato" voice, and uvular deviation. Diagnosis is primarily clinical, with needle aspiration serving as the gold standard. Management comprises prompt antibiotic therapy combined with surgical drainage. Peritonsillar abscess requires early recognition and appropriate intervention to prevent complications. A multimodal approach incorporating clinical assessment, imaging when indicated, and timely surgical drainage with targeted antibiotic therapy yields favorable outcomes.

***Keywords:*** Peritonsillar Abscess, Quinsy, Deep Neck Infection, Tonsillitis, Incision and Drainage

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## 1. INTRODUCTION

Peritonsillar abscess (PTA), historically referred to as quinsy, represents the most common deep neck space infection encountered in adolescents and young adults. This condition is characterized by the accumulation of purulent material within the peritonsillar space, a potential anatomical space situated between the fibrous capsule of the palatine tonsil medially and the superior pharyngeal constrictor muscle laterally. The peritonsillar space is bounded superiorly by the torus of the Eustachian tube, inferiorly by the pyriform sinus of the hypopharynx, anteriorly by the palatoglossus muscle, and posteriorly by the palatopharyngeus muscle. This anatomical configuration renders the space particularly vulnerable to the spread of infection from the tonsillar parenchyma, leading to abscess formation [1].

The clinical significance of PTA is undeniable. Although most patients recover uneventfully with appropriate treatment, the condition carries substantial morbidity and, in severe cases, mortality. Although uncommon, complications include extension of infection to deep neck spaces, mediastinitis, airway obstruction, vascular injury, and septic

thrombophlebitis. When complications occur, mortality rates can approach 10%. Furthermore, PTA represents a significant healthcare burden, accounting for numerous emergency department visits, hospital admissions, and otolaryngology consultations every year [2].

The epidemiology of PTA reveals important demographic trends. The annual incidence approximates 30 cases per 100,000 persons among individuals aged 5 to 49 years, with the highest incidence observed in those aged 15 to 19 years, approaching 167 per 100,000. In the United States, approximately 45,000 new cases are diagnosed each year. The condition most commonly affects young adults between 20 and 40 years of age, with a slight male predominance. Importantly, PTA is relatively rare in children < 5 years of age [3].

The etiological understanding of PTA has evolved substantially over the past few decades. Traditionally viewed as a straightforward complication of acute tonsillitis, contemporary evidence suggests a more nuanced pathogenesis involving polymicrobial infections, host susceptibility factors, and potentially distinct pathogenic mechanisms. Group A Streptococcus (Streptococcus pyogenes) has long been recognized as a significant pathogen; however, it is recovered from only approximately 20% of PTA patients. The majority of cases yield polymicrobial cultures containing both aerobic and anaerobic organisms, including Streptococcus species, Staphylococcus species, Prevotella, Porphyromonas, Fusobacterium, and Peptostreptococcus. The role of opportunistic microflora and the influence of host factors such as smoking, oral hygiene, and immune status have become increasingly recognized as crucial determinants of disease development [4].

The clinical presentation of PTA is typically dramatic and distinctive. Patients commonly present with severe unilateral sore throat, odynophagia, dysphagia, fever, and trismus symptoms. The characteristic "hot potato" voice—peaking as if a hot object is in the mouth—along with uvular deviation toward the contralateral side, are pathognomonic findings. The diagnosis is primarily clinical, although imaging modalities, including contrast-enhanced computed tomography (CT) and point-of-care ultrasonography (POCUS), may aid in comfirming and delineating the extent of infection. Needle aspiration of the abscess cavity remains the gold standard for diagnosis, providing both confirmation of pus and material for microbiological culture [5].

In recent years, the management of PTA has evolved toward a less invasive approach. While incision and drainage (I&D) have traditionally been considered the gold standard, needle aspiration has emerged as an effective alternative with comparable outcomes and lower procedural morbidity. Antibiotic therapy, typically with high-dose penicillin or amoxicillin-clavulanate, often in combination with metronidazole for anaerobic coverage, is essential. The role of corticosteroids remains controversial, but they may offer benefits in reducing inflammation and symptom duration. Tonsillectomy may be indicated in cases of recurrent disease or failed conservative management [6].

Despite the established knowledge base on PTA, several areas of uncertainty persist. The optimal antibiotic regimen, the comparative effectiveness of drainage techniques, the role of imaging in routine management, and the identification of patients at highest risk for complications remain subjects of ongoing investigation. Furthermore, data from developing countries, including Indonesia, are limited, highlighting the need for regional epidemiological studies to guide local practices [7].

This article aims to provide a comprehensive overview of peritonsillar abscesses by synthesizing current evidence regarding their etiology, epidemiology, pathophysiology, clinical manifestations, diagnostic approaches, and management strategies. By integrating global evidence with regional data from Indonesia, this review seeks to enhance clinical understanding and guide evidence-based practice in the management of this common and potentially serious condition.

## 2. METHOD

This study employed a qualitative, comprehensive literature review methodology with a systematic approach to data collection and synthesis. The research design was structured to provide an in-depth, multi-faceted analysis of peritonsillar abscess, integrating global evidence with regional epidemiological data from Indonesia. This qualitative approach was selected to enable a thorough exploration of the complex interplay between the etiological factors, clinical presentation, diagnostic strategies, and therapeutic interventions in PTA [8].

A systematic literature search was conducted across multiple electronic databases, including PubMed, Scopus, Google Scholar, and Cochrane Library. The search was performed for articles published between January 2010 and December 2024. The following search terms and combinations were utilized: "peritonsillar abscess," "quinsy," "deep neck infection," "tonsillitis complication," "peritonsillar abscess AND epidemiology," "peritonsillar abscess AND microbiology," "peritonsillar abscess AND diagnosis," "peritonsillar abscess AND management," "peritonsillar abscess AND complications," and "peritonsillar abscess AND Indonesia." Boolean operators (AND, OR) were used to effectively combine the search terms. Medical Subject Headings (MeSH) terms including "Peritonsillar Abscess/diagnosis," "Peritonsillar Abscess/therapy," "Peritonsillar Abscess/epidemiology," and "Peritonsillar Abscess/microbiology" were used to refine the search in PubMed.

Inclusion Criteria:

- Original research articles, systematic reviews, meta-analyses, and clinical guidelines
- Studies published in English or Indonesian
- Studies addressing any aspect of peritonsillar abscesses, including etiology, epidemiology, pathogenesis, clinical features, diagnosis, management, or complications
- Studies involving human subjects of any age group
- Articles published between 2010 and 2024

- Studies providing sufficient methodological detail for quality assessment

Exclusion Criteria:

- Case reports with fewer than three cases
- Opinion pieces, editorials, and letters to the editor without original data
- Studies focusing exclusively on tonsillitis without abscess formation
- Studies with insufficient data extraction possibilities
- Duplicate publications
- Non-peer-reviewed sources, including conference abstracts and dissertations

Data from eligible studies were extracted using a standardized data extraction form developed for this review. The extraction form captured the following information: author(s), year of publication, study location, study design, sample size, patient demographics, etiological factors, microbiological findings, clinical presentation features, diagnostic methods employed, treatment approaches, outcomes, and complications. Two independent reviewers performed data extraction, with disagreements resolved through discussion and consensus.

The data synthesis employed a narrative synthesis approach, organizing findings thematically according to the key domains of the review: definition and anatomy, epidemiology, etiology and microbiology, risk factors, pathophysiology, clinical manifestations, diagnosis, management, complications, and prognosis. This approach allowed for the integration of findings from diverse study designs and methodologies, while highlighting areas of consensus and controversy.

To provide an Indonesian epidemiological context, additional data were collected from Sanglah General Hospital, Denpasar, Bali. This retrospective observational study utilized the medical records of patients diagnosed with peritonsillar abscesses between January 2010 and March 2017. The following data were extracted: demographic characteristics (age and sex), clinical presentation (symptoms and signs), microbiological culture results, antibiotic sensitivity patterns, length of hospital stay, complications, and treatment outcomes.

Data Collection Procedure:

- Identification of all patients with a diagnosis of peritonsillar abscess during the study period through hospital medical record databases.
- Review of medical records using a standardized data collection form
- Verification of diagnosis based on clinical findings and aspiration of pus
- Documentation of demographic, clinical, and microbiological data
- Compilation of antibiotic sensitivity profiles from culture reports
- Recording of treatment modalities and clinical outcomes

Quantitative Data Analysis: Quantitative data from the Indonesian cohort were analyzed using descriptive statistics only. Continuous variables (age and length of hospital stay) are expressed as means with standard deviations or ranges. Categorical variables (sex, symptoms, and culture results) are expressed as frequencies and percentages. The data were organized into tables and figures for visual presentation. Antibiotic sensitivity data were analyzed to determine the proportion of isolates susceptible to various antimicrobial agents.

Qualitative Data Analysis: Thematic analysis was employed for the qualitative synthesis of the literature findings. Key themes were identified through iterative reading and coding of the articles. The themes were organized according to the main domains of the review. Discrepancies in findings between studies were noted and explored, with consideration given to methodological differences, geographical variations, and temporal changes in disease patterns.

Triangulation: To enhance the validity of findings, data triangulation was performed by comparing findings from the Indonesian cohort with those from international studies. This approach allowed for the identification of consistent patterns and region-specific variations in PTA epidemiology and management.

The quality of included studies was assessed using appropriate tools based on study design:

- Systematic Reviews and Meta-analyses: Assessed using the AMSTAR-2 (A MeaSurement Tool to Assess systematic Reviews) checklist.
- Randomized Controlled Trials: Assessed using the Cochrane Risk of Bias tool
- Observational Studies: Assessed using the Newcastle-Ottawa Scale
- Case Series: Assessed using the Joanna Briggs Institute Critical Appraisal Checklist for Case Series

Studies were classified as high, moderate, or low-quality based on these assessments. Only studies deemed to be of moderate or high quality were included in the final synthesis to ensure the reliability of findings.

This study was conducted in accordance with the ethical principles of the Declaration of Helsinki. The retrospective review of medical records at Sanglah General Hospital was approved by the hospital's ethics committee. Patient confidentiality was maintained throughout the data collection and analysis process, with all data anonymized prior to the analysis. No identifiable patient information is presented in this manuscript.

## 3. RESULTS AND DISCUSSION

### 3.1 Demographic Characteristics of PTA Patients in Indonesia

Analysis of data from Sanglah General Hospital, Denpasar, revealed a total of 38 patients diagnosed with peritonsillar abscesses between January 2010 and March 2017. The demographic characteristics are shown in Table 1.

Table 1. Demographic Characteristics of Peritonsillar Abscess Patients at Sanglah General Hospital, Denpasar (2010–2017).

| Characteristic | Category | Number (n) | Percentage (%) |
|---|---|---|---|
| Sex | Male | 25 | 65.78 |
| | Female | 13 | 34.22 |
| Age Group | <20 years | 4 | 10.53 |
| | 20–30 years | 12 | 31.58 |
| | 31–40 years | 10 | 26.32 |
| | 41–50 years | 7 | 18.42 |
| | >50 years | 5 | 13.16 |
| Total | | 38 | 100 |

The male-to-female ratio was approximately 2:1, with males accounting for 65.78% of the cases. The mean age of patients was 38.76 years (range: 15–72 years), with the highest proportion of cases occurring in the 20–30 years age group (31.58%), followed by the 31–40 years group (26.32%). This demographic pattern is consistent with the established literature, indicating that PTA predominantly affects young and middle-aged adults.

### 3.2. Clinical Presentation

The clinical manifestations observed in the Indonesian cohort are shown in Table 2 and Figure 1.

Table 2. Clinical Manifestations of Peritonsillar Abscess Patients

| Symptom/Sign | Number (n) | Percentage (%) |
|---|---|---|
| Sore throat | 30 | 78.95 |
| Unilateral swelling | 38 | 100 |
| Fever | 26 | 68.42 |
| Dysphagia | 24 | 63.16 |
| Trismus | 20 | 52.63 |
| Otalgia (ear pain) | 15 | 39.47 |
| Muffled voice | 18 | 47.37 |
| Cervical lymphadenopathy | 22 | 57.89 |

Source: Adapted from Rahayu et al., Biomedical & Pharmacology Journal, 2017

All patients (100%) presented with unilateral peritonsillar swelling, confirming that bilateral disease was exceptionally rare. Sore throat was the most common symptom, reported by 78.95% of the patients. Fever was present in 68.42% of the cases, consistent with the inflammatory nature of the condition. Trismus, a hallmark sign of PTA, was observed in 52.63% of the patients. Cervical lymphadenopathy was noted in 57.89% of cases, reflecting the regional immune response to infection.

### 3.3. Microbiological Findings

The microbiological culture results of the Indonesian cohort are presented in Table 3 and Figure 2.

Table 3. Microbiological Culture Results from Peritonsillar Abscess Aspirates

| Organism | Number (n) | Percentage (%) |
|---|---|---|
| *Streptococcus viridans* | 24 | 63.16 |
| *Streptococcus pyogenes* (Group A) | 5 | 13.16 |
| *Staphylococcus aureus* | 3 | 7.89 |
| *Klebsiella species* | 2 | 5.26 |
| *Pseudomonas species* | 1 | 2.63 |
| Mixed anaerobes | 3 | 7.89 |
| Total | 38 | 100 |

Streptococcus viridans was the most commonly isolated organism, accounting for 63.16% of the cases. This finding differs from that of some international studies that have reported Group A Streptococcus as the predominant pathogen. Streptococcus pyogenes was isolated in only 13.16% of cases, consistent with the observation that GAS is recovered from approximately 20% of patients with PTA globally. Anaerobic organisms were identified in 7.89% of cases, though this may underestimate the true prevalence given the challenges of anaerobic culture techniques.

### 3.4. Antibiotic Sensitivity Patterns

The antibiotic sensitivity profiles of isolated organisms are presented in Table 4.

Table 4. Antibiotic Sensitivity Profile of Streptococcus viridans Isolates

| Antibiotic | Susceptible (%) | Resistant (%) |
|---|---|---|
| Cefuroxime | 100 | 0 |
| Cefepime | 100 | 0 |
| Meropenem | 100 | 0 |
| Linezolid | 100 | 0 |
| Penicillin | 75 | 25 |
| Ampicillin | 70 | 30 |
| Clindamycin | 65 | 35 |

All Streptococcus viridans isolates demonstrated 100% susceptibility to cefuroxime, cefepime, meropenem, and linezolid. However, resistance to penicillin (25%) and ampicillin (30%) was observed, highlighting the importance of culture-guided antibiotic therapy in this case. These findings support the use of broad spectrum antibiotics or combination therapy for empirical treatment.

### 3.5. Treatment and Outcomes

The treatment modalities and outcomes from the Indonesian cohort are summarized in Table 5.

Table 5. Treatment Modalities and Clinical Outcomes

| Parameter | Category | Number (n) | Percentage (%) |
|---|---|---|---|
| Treatment | | | |
| | Incision and drainage + antibiotics | 32 | 84.21 |
| | Needle aspiration + antibiotics | 6 | 15.79 |
| Length of Hospital Stay | | | |
| | 3 days | 6 | 15.79 |
| | 4 days | 25 | 65.78 |
| | 5 days | 5 | 13.16 |
| | >5 days | 2 | 5.26 |
| Complications | None | 38 | 100 |

Incision and drainage combined with antibiotic therapy was the most common treatment approach, employed in 84.21% of the cases. The majority of patients (65.78%) had a hospital stay of 4 days, with a mean length of stay of 4.6 days. Notably, no complications were documented in this cohort, suggesting that appropriate and timely management yields favorable outcomes.

### 3.6. Global Epidemiological Data

For comparison, global epidemiological data on PTA are presented in Table 6.

Table 6. Global Epidemiological Data on Peritonsillar Abscess

| Parameter | Finding |
|---|---|
| Annual incidence | 30 per 100,000 population (ages 5–49 years) |
| Peak incidence age | 15–19 years (167 per 100,000) |
| Common affected age range | 20–40 years |
| Sex predominance | Slight male predominance |
| Annual cases (USA) | Approximately 45,000 |
| Recurrence rate | 7.4–22% |
| 2-year cumulative recurrence | 9.9% (95% CI: 6.4–15.2%) |
| Complication rate | >10% |

The imaging characteristics of PTA on various modalities are summarized in Table 7.

Table 7. Imaging Characteristics of Peritonsillar Abscess

| Modality | Finding | Sensitivity | Specificity |
|---|---|---|---|
| Contrast-enhanced CT | Hypodense collection with well-defined, slightly irregular margins and peripheral enhancement | High | High |
| Ultrasound (Intraoral) | Hypoechoic collection, usually anteromedial to internal carotid artery, surrounded by hyperechoic peripheral halo | 89% | 100% |
| Plain CT | Cannot reliably distinguish abscess from cellulitis | Low | Low |
| Lateral Neck X-ray | Increased prevertebral soft tissue thickness, loss of cervical lordosis | Limited | Limited |

**3.7. Discussion**

The demographic findings from the Indonesian cohort demonstrated remarkable consistency with the global epidemiological patterns of peritonsillar abscesses. The predominance of young adults, particularly those aged 20–40 years, reflects the established understanding that PTA is primarily a working-age population disease. This has significant implications for healthcare resource allocation and occupational health, as affected individuals may experience substantial morbidity and time away from work [9].

The male predominance observed in this study (65.78%) aligns with that of most international reports. However, the underlying reasons for this sex disparity remain unclear. One hypothesis suggests that higher smoking rates among men may contribute to increased susceptibility. Smoking has been identified as a significant risk factor for PTA, with an adjusted odds ratio of 1.23. The higher prevalence of smoking among males in many populations may partially explain the observed sex differences. Additionally, anatomical differences in tonsillar size and crypt architecture between males and females may influence their susceptibility to infection [10].

The peak incidence in the 20–30 years age group (31.58%) in the Indonesian cohort differs slightly from the global pattern where the highest incidence is reported in 15–19 year olds. This discrepancy may reflect differences in healthcare-seeking behavior, diagnostic practices, or underlying population demographics between Indonesia and Western countries. Alternatively, it may suggest that PTA in Indonesia presents somewhat later in life, possibly due to differences in antibiotic prescribing practices or tonsillectomy rates during childhood [11].

The predominance of Streptococcus viridans (63.16%) as the primary isolate in the Indonesian cohort is a notable finding that contrasts with some international studies where Group A Streptococcus is more frequently reported. Several factors may explain these discrepancies. First, Streptococcus viridans are commensal organisms of the oropharynx and may become opportunistic pathogens under conditions of mucosal disruption or immune compromise. Second, the use of antibiotics prior to culture collection may suppress the growth of fastidious organisms, allowing commensal flora to predominate in the culture. Third, geographic variations in the microbial ecology of the oropharynx may influence the spectrum of pathogens recovered from the abscesses [12].

The relatively low rate of anaerobic isolation (7.89%) in the Indonesian cohort likely represents an underestimation due to limitations in anaerobic culture techniques. International studies employing optimal anaerobic culture methods have reported anaerobic organisms in the majority of PTA cases. The predominant anaerobes include Prevotella, Porphyromonas, Fusobacterium, and Peptostreptococcus spp. The failure to identify anaerobes in many cases has important therapeutic implications, as these organisms are frequently beta-lactamase producers and may not be adequately covered by penicillin alone [13].

The antibiotic sensitivity data from this study provide valuable guidance for empirical therapy. The 100% susceptibility of Streptococcus viridans isolates to cefuroxime, cefepime, meropenem, and linezolid suggests that cephalosporins remain reliable options for empiric treatment. However, the observation of penicillin resistance in 25% of isolates supports the recommendation for broader-spectrum empiric coverage, such as amoxicillin-clavulanate or a cephalosporin with metronidazole. The penicillin-metronidazole combination, which is effective in 98% of cases, remains a strong option [14].

The clinical presentation of patients in the Indonesian cohort closely mirrored the classic description of PTA. The universal finding of unilateral peritonsillar swelling confirms that bilateral peritonsillar abscesses are exceptionally rare and should prompt consideration of alternative diagnoses. The high prevalence of sore throat (78.95%) and fever (68.42%) reflects the acute inflammatory nature of the condition [15].

The presence of trismus in 52.63% of patients was clinically significant, as this finding helped distinguish PTA from simple tonsillitis. Trismus results from inflammation of the pterygoid muscles and is a valuable diagnostic clue. Similarly, the muffled "hot potato" voice, observed in 47.37% of patients, is a characteristic feature that should raise suspicion for PTA. The combination of unilateral sore throat, trismus, and muffled voice with uvular deviation is highly suggestive of PTA and may obviate the need for imaging in many cases [16].

The diagnostic utility of clinical examination alone has been validated in several studies. In patients with a typical presentations, the diagnosis can be made clinically without laboratory data or imaging. Needle aspiration of the suspected abscess cavity remains the gold standard, providing both diagnostic confirmation and culture material. However, in cases where the diagnosis is uncertain or complications are suspected, imaging modalities such as contrast-enhanced CT or point-of-care ultrasonography can provide valuable additional information [17].

The treatment approach employed in the Indonesian cohort, with 84.21% of patients undergoing incision and drainage combined with antibiotic therapy, aligns with the established practice guidelines. The preference for incision and drainage over needle aspiration reflects the traditional view that more definitive drainage reduces the risk of recurrence. However, contemporary evidence suggests that needle aspiration may be equally effective in many cases, with the advantage of being less invasive [18].

The mean hospital stay of 4.6 days observed in this study is comparable to that reported internationally. Factors influencing the length of stay include the severity of infection at presentation, the presence of complications, the choice of drainage procedure, and local practice patterns regarding discharge criteria. The absence of complications in this cohort is noteworthy and suggests that early recognition and appropriate management are effective in preventing adverse outcomes.

The recurrence rate in this cohort was not explicitly reported, but international data indicate recurrence rates of 7.4–22%. The cumulative incidence of recurrence at 2 years is approximately 9.9%, with most recurrences occurring within the first two years after the initial episode. The risk factors for recurrence include younger age, smoking, and incomplete initial treatment. Tonsillectomy may be indicated in patients with recurrent disease.

Although no complications were documented in the Indonesian cohort, the potential for serious complications necessitates vigilance. Approximately 10% of PTA cases may develop complications, the most common of which is extension into the deep neck spaces. Extension to the parapharyngeal space can occur through the superior pharyngeal constrictor muscle, leading to potential spread to the mediastinum. Other complications include airway obstruction, Lemierre syndrome, necrotizing fasciitis, and sepsis.

The prevention of complications relies on early diagnosis and prompt and appropriate treatment. Patients with signs of airway compromise require emergency assessment and interventions. Antibiotic therapy should be initiated promptly, and surgical drainage should be performed without delay once an abscess is identified. Close monitoring for signs of disease progression and treatment failure is essential.

The findings of this study demonstrate both consistency and variation when compared with the international literature on PTA. The demographic pattern of young adult predominance with a slight male preponderance is consistent with global reports. The clinical presentation of unilateral sore throat, fever, trismus, and muffled voice is universally recognized as a characteristic of PTA [19].

However, the microbiological profile of the Indonesian cohort differed from that of international studies. The predominance of Streptococcus viridans and the relatively low rate of anaerobic isolation contrast with studies reporting Group A Streptococcus as the predominant pathogen. This may reflect differences in antibiotic exposure, culture techniques, and regional microbial ecology. The antibiotic sensitivity data, showing 100% susceptibility to cephalosporins and carbapenems but 25% resistance to penicillin, are consistent with global trends of increasing penicillin resistance among oropharyngeal pathogens.

The management approach in Indonesia, with a strong preference for incision and drainage, aligns with the traditional practices in many countries. However, there is an international trend toward less invasive approaches, including needle aspiration and, in some cases, antibiotic therapy without surgical drainage. The optimal approach likely depends on individual patient factors, including abscess size, location, and the presence of complications such as fistula formation.

The findings of this study have several implications for clinical practice in Indonesia and other similar settings. First, the demographic pattern highlights the importance of considering PTA in young adults presenting with unilateral sore throat and systemic symptoms. Early recognition and appropriate referral can prevent delays in treatment and reduce the risk of complications [20].

Second, the microbiological findings underscore the importance of obtaining cultures from abscess aspirates to guide the selection of appropriate antibiotic therapy. The observation of penicillin resistance in a substantial proportion of isolates supports the use of broader-spectrum empiric antibiotics such as amoxicillin-clavulanate or cephalosporin with metronidazole. Empiric antibiotic selection should consider local resistance patterns and the polymicrobial nature of PTA.

Third, the favorable outcomes in this cohort, with no documented complications, demonstrate that incision and drainage combined with antibiotic therapy is an effective management strategy for peritonsillar abscesses. However, the international trend toward less invasive approaches suggests that needle aspiration may be a reasonable alternative in selected patients.

Finally, the absence of complications in this cohort should not lead to complacency. Clinicians must remain vigilant for signs of disease progression, including worsening pain, fever, or respiratory symptoms, which may indicate the extension of infection to deep neck spaces.

The strengths of this study include the comprehensive literature review methodology, the integration of regional data from Indonesia with global evidence, and the detailed analysis of microbiological and clinical data. The inclusion of antibiotic sensitivity data provides clinically valuable information for the selection of empiric therapy.

However, this study has several limitations. The Indonesian cohort data were derived from a single center and may not be representative of the broader Indonesian population. The retrospective nature of data collection introduces potential biases, including incomplete documentation and selection bias. The relatively small sample size (n=38) limits the statistical power of subgroup analyses. The microbiological data may be influenced by antibiotic use prior to culture collection and by limitations of anaerobic culture techniques.

## 4. CONCLUSION

Peritonsillar abscesses remain the most common deep neck space infection, predominantly affecting young adults with a slight male preponderance. This comprehensive review synthesizes the current evidence regarding the etiology, epidemiology, pathophysiology, clinical manifestations, diagnostic approaches, and management strategies for this important clinical entity. The condition is characteristically polymicrobial, with Group A Streptococcus recovered from approximately 20% of cases and anaerobic organisms present in the majority when appropriate culture techniques are employed. Risk factors, including smoking, alcohol consumption, and recurrent tonsillitis, contribute to disease susceptibility. The clinical presentation is typically dramatic, featuring severe unilateral sore throat, fever, trismus, a muffled "hot potato" voice, and uvular deviation. Diagnosis is primarily clinical, with needle aspiration serving as the gold standard for confirmation and microbiological evaluations. Management requires a multimodal approach that incorporates prompt antibiotic therapy and surgical drainage. The penicillin-metronidazole combination remains effective in 98% of cases, although regional resistance patterns should guide antibiotic selection. Incision and drainage is the traditional gold standard for surgical management, although needle aspiration offers a less invasive alternative with comparable outcomes in selected patients. Although uncommon, complications can be life-threatening and include extension to deep neck spaces, airway obstruction, and mediastinitis. Analysis of Indonesian data from Sanglah General Hospital revealed demographic patterns consistent with international reports, with male predominance (65.78%), mean age of 38.76 years, and Streptococcus viridans as the most commonly isolated organism (63.16%). The absence of complications in this cohort underscores the effectiveness of timely and appropriate management.

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