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# MODERN APPROACHES TO THE TREATMENT AND PREVENTION OF COMPLICATIONS OF PERITONSILLAR ABSCESS

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**Abstract:** Peritonsillar abscess (PTA) is a purulent inflammatory process in the peritonsillar space, commonly occurring as a complication of acute bacterial tonsillitis or chronic tonsillar decompensation. It remains one of the most frequent ENT emergencies. This article presents a detailed review of the etiopathogenesis, clinical presentation, modern diagnostic methods, treatment algorithms, and strategies for preventing complications associated with PTA. The importance of early diagnosis and timely surgical drainage combined with rational antibiotic therapy is emphasized. Immunological status, recurrence risk, and indications for tonsillectomy are also discussed. Preventive approaches such as public awareness, infection control, and vaccination are proposed as key tools in reducing the burden of PTA.

**Keywords:** Peritonsillar abscess; Complications; Antibiotic therapy; Surgical treatment; Immunity; Diagnosis; Preventive measures; Purulent infection; Otorhinolaryngology; Tonsillectomy

## Introduction

Peritonsillar abscess (PTA) is a serious, potentially life-threatening ENT condition characterized by the accumulation of pus in the peritonsillar space. It is most commonly a complication of untreated acute tonsillitis. Epidemiological data indicate an incidence of 30–45 cases per 1,000,000 population per year in Western countries, with a higher prevalence among males aged 20 to 40.

## Etiology and Pathogenesis

Microbiological Factors:
- Streptococcus pyogenes (GABHS) – 60–75%
- Mixed infections: Staphylococcus aureus, Haemophilus influenzae, anaerobes (Fusobacterium necrophorum, Prevotella spp.)

Pathogenesis:
The development typically follows cryptic tonsillitis leading to blockage and deep-seated infection of the tonsillar crypts. Immune dysfunction, including reduced local

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immunoglobulin A and G production, contributes to disease progression. Predisposing factors include smoking, diabetes mellitus, and immunosuppressive therapy.

**Clinical Presentation**

Symptoms:
- Severe unilateral throat pain (90–100%)
- Trismus (limited mouth opening) (80–90%)
- Fever (≥ 38.5°C) (85%)
- "Hot potato" voice (60–70%)
- Uvula deviation (60–75%)
- Cervical lymphadenopathy (50–65%)

Physical Findings:
- Unilateral swelling and erythema of the soft palate
- Uvula pushed toward the unaffected side
- Bulging of the peritonsillar area
- Palpable fluctuation in advanced stages

**Diagnostics**

Laboratory Tests:
- CBC: Leukocytosis (12–18×10⁹/L), Neutrophilia, ESR > 40 mm/h
- C-reactive protein > 50 mg/L
- ASO titer may support GABHS diagnosis

Imaging:
- Needle aspiration is the gold standard for diagnosis
- CT scan or MRI of the neck in suspected deep space involvement
- Ultrasound for evaluating adjacent deep neck spaces

**Complications**

- Parapharyngeal abscess: carotid artery erosion, septic thrombophlebitis
- Retropharyngeal abscess: airway compromise
- Mediastinitis: high mortality (25–40%)
- Sepsis: multi-organ failure
- Recurrent PTA: indication for tonsillectomy if >2 episodes per year

**Treatment Algorithm**

I. Antibiotic Therapy:
- Amoxicillin-clavulanate: 1.2 g IV twice daily
- Ceftriaxone: 1–2 g IV once daily
- Clindamycin: 600 mg IV every 8 hours
- Metronidazole: 500 mg IV every 8 hours

II. Surgical Intervention:

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- Needle aspiration, I&D, or tonsillectomy

III. Supportive Therapy:
- IV fluids, NSAIDs, antipyretics, immunomodulators, oral rinses

**Prevention Strategies**

1. Treatment of chronic tonsillitis
2. Antibiotic stewardship
3. Oral hygiene and dental care
4. Boosting immunity (vitamins, lifestyle)
5. Regular ENT checkups
6. Prophylactic measures during flu season

**Conclusion**

Peritonsillar abscess is a potentially serious ENT emergency requiring rapid recognition and appropriate intervention. Early diagnosis, prompt drainage, and targeted antibiotic therapy form the cornerstone of effective management. In recurrent cases, tonsillectomy significantly reduces relapse risk. Public health awareness and preventive strategies are crucial to decreasing the incidence and complications of PTA.

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