

## ASSESSMENT METHODS AND TREATMENT OF ODONTOGENIC PHLEGMONS IN CHILDREN: CLINICAL FEATURES AND MANAGEMENT

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### Abstract

Odontogenic phlegmon is a serious purulent infection of the maxillofacial region that originates from dental sources. In pediatric patients, the clinical course, diagnosis, and treatment require special attention due to the anatomical and immunological features of children. This paper discusses the clinical presentation, diagnostic approaches, and therapeutic strategies for managing odontogenic phlegmon in children.

### 1. Introduction

Odontogenic infections account for a significant proportion of orofacial infections in children. These infections can spread rapidly and lead to potentially life-threatening complications if not diagnosed and treated promptly. Phlegmon, a diffuse inflammation of soft tissue with pus formation, often arises due to untreated dental caries or periapical infections.

### 2. Clinical Features

Children with odontogenic phlegmon commonly present with:

- Facial swelling (often unilateral)
- Fever and malaise
- Trismus (difficulty opening the mouth)
- Pain and tenderness in the affected area
- Intraoral swelling, fluctuation, or pus discharge

Due to their developing immune system and relatively thin facial bones, children may develop severe symptoms more rapidly than adults.

### 3. Diagnostic Methods

Diagnosis is primarily clinical but supported by imaging and laboratory tests:

- **Clinical examination** to assess swelling, fluctuation, and lymphadenopathy
- **Radiographs** (periapical, panoramic) to identify the dental origin
- **Ultrasound or CT scan** to evaluate soft tissue involvement and abscess formation
- **Blood tests:** elevated white blood cell count and C-reactive protein (CRP)

## 4. Treatment Approaches

### 4.1. Pharmacological Management

• **Empirical antibiotics** are initiated immediately. The most commonly used antibiotics include:

- Amoxicillin-clavulanate
- Clindamycin (especially for penicillin-allergic patients)
- Metronidazole (in combination for anaerobic coverage)

### 4.2. Surgical Intervention

- Indicated when there is:
  - Fluctuant swelling
  - Failed response to antibiotics
  - Airway compromise
- Procedures include:
  - Incision and drainage
  - Tooth extraction (if the offending tooth is non-restorable)
  - Root canal therapy (for restorable teeth)

### 4.3. Supportive Therapy

- Analgesics and antipyretics
- Adequate hydration and nutritional support
- Hospitalization in severe cases

## 5. Prognosis

With timely and appropriate intervention, the prognosis is generally favorable. However, delayed treatment may lead to complications such as deep neck infections, airway obstruction, or sepsis.

## 6. Conclusion

Odontogenic phlegmons in pediatric patients demand prompt clinical attention due to the risk of rapid progression. A combination of clinical examination, radiological imaging, and effective medical-surgical treatment ensures favorable outcomes.

## References

1. **Peterson, L. J., Ellis, E., Hupp, J. R., & Tucker, M. R. (2017).** *Contemporary Oral and Maxillofacial Surgery*. Elsevier Health Sciences.
2. **Kaczmarzyk, T., et al. (2023).** "Analysis of the Clinical Status and Treatment of Facial Cellulitis of Odontogenic Origin in Pediatric Patients." *International Journal of Environmental Research and Public Health*, 20(6), 4874. <https://doi.org/10.3390/ijerph20064874>
3. **Seppänen, L., et al. (2011).** "Infection origin and treatment of odontogenic infections in children." *International Journal of Pediatric Otorhinolaryngology*, 75(4), 491–494.

4. **Matsumoto, M. A., et al. (2012).** "Odontogenic infections in children: A review." *Journal of Pediatric Infectious Diseases*, 7(3), 197–202.
5. **Guven, M. (2008).** "A retrospective study of patients with odontogenic infections treated in a hospital setting." *Journal of Craniofacial Surgery*, 19(2), 152–158.
6. **Abdullaev, I. B., et al. (2022).** "Advanced Surgical Treatment for Odontogenic Plugous-Necrotic Phlegmons of the Maxillofacial Region." *Central Asian Journal of Medical and Natural Sciences*.  
<https://cajmns.centralasianstudies.org/index.php/CAJMNS/article/view/128>