

Retropharyngeal Abscess in Children

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Introduction

Deep neck spaces (DNI) are then classified into three groups according to their relative position to the hyoid bone: suprahyoid (peritonsillar, submandibular, parapharyngeal, temporal, buccal, and parotid spaces), with full-length extension in the neck (retropharyngeal, prevertebral, and carotid spaces), anterior (or pretracheal) space, or infrahyoid area (below the hyoid bone). The peritonsillar space is the most frequently affected in children (1). Other common DNI localizations are para- and retropharyngeal loggias, where suppurative processes may not find obstacles to their extension, resulting in potentially fatal conditions such as airway compression, jugular septic thrombosis (Lemierre's syndrome), and mediastinitis (2).

Retropharyngeal abscess (RPA) is an uncommon infection in the midline deep neck space, stretching from the base of the skull to the posterior mediastinum. The incidence of RPA has risen from 2.98 per 100,000 in children under 20 years in 2003 to 4.10 per 100,000 in 2012, particularly affecting children aged 3 to 5 years, with a 2:1 male predominance (1). Literature on RPA is limited, primarily sourced from case reports, with a notable scarcity in the pediatric age group. The most substantial recent case series, from 2004, studied 68 pediatric cases over a decade (2). Advances in imaging and widespread antibiotic use have significantly mitigated the severity and complications of RPA, turning a once life-threatening condition into a more manageable one if identified early.

The diagnosis of RPA is frequently delayed due to nonspecific signs and symptoms, including fever, neck pain, odynophagia, and drooling of saliva. Infants may present with varied symptoms due to an underdeveloped immune system. Clinical examination may reveal stridor, asymmetry, neck mass, or torticollis. A high index of suspicion and

supportive imaging, such as CT scans, are crucial for confirmation. Differential diagnoses, including foreign body issues, epiglottitis, and neoplastic disease, must be ruled out. Delayed treatment may lead to complications like airway compromise, mediastinitis, meningitis, vascular issues, sepsis, and respiratory distress syndrome.

A comprehensive treatment team involving an otolaryngologist, anesthetist, critical care specialist, and radiologist is essential. Treatment involves immediate surgical drainage, with or without tonsillectomy, though conservative antibiotic management may be attempted for noncomplicated abscesses. Practice variations in the management of deep neck space infections were identified in the 1990s and continue to exist (3). Recent case series and treatment algorithms supported greater use of intravenous antibiotics without drainage as an alternative to routine initial surgical drainage (4), but in 1 recent US series (5), 75% of patients with a deep neck space infection underwent initial surgical drainage. National treatment trends in the United States were examined only recently (6). Administering high doses of intravenous antibiotics proves to be a successful resolution for deep space neck abscesses, potentially eliminating the necessity for surgical drainage, especially in cases of smaller abscesses. If children do not exhibit prompt responsiveness to antibiotics, surgical intervention is more likely needed for resolution. Larger abscesses in children might show improvement with antibiotic therapy alone but necessitate vigilant monitoring. In stable children, particularly those with minor deep space neck abscesses, a primary approach involving a trial of high-dose intravenous antibiotics alongside close observation is recommended.

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