In Brief: Retropharyngeal Abscess
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Retropharyngeal and Parapharyngeal Retropharyngeal Abscess in Children: Potential space anterior to the prevertebral soft tissue plane to the corresponding vertebral body. This width should be less than one half the width of the corresponding vertebral body. More precise measurements are usually obtained at C2, where the soft-tissue space can be up to 22 mm in adults. However, the prevertebral space may appear falsely enlarged during neck flexion or crying. Computed tomography (CT) remains the best imaging method to confirm the diagnosis, although it has been demonstrated to have a low sensitivity (43%) and specificity (63%) in distinguishing between retropharyngeal abscess and cellulitis. CT scan is helpful to assess the extent of the infection and determine if it has spread to contiguous structures. However, such scans introduce issues of sedation (particularly problematic if there are airway issues) and additional radiation. Ultrasonography of the affected region is technically difficult.

Traditional management of a retropharyngeal abscess has involved transoral surgical drainage. However, recent published pediatric reviews suggest that only 25% to 50% of patients require surgery; most pediatric patients can be treated successfully with medical therapy alone as long as there is no airway compromise. Thus, it may be appropriate to wait 24 to 48 hours while the patient is receiving broad-spectrum antibiotics before considering surgical intervention. Clindamycin remains the first-line antibiotic choice. Given the polymicrobial nature of this disease and the increasing frequency of resistance to clindamycin, it may be useful to expand antibiotic coverage to include either a third-generation cephalosporin or a beta-lactamase-resistant


In Brief

Retropharyngeal Abscess

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Retropharyngeal abscess is an infrequent but serious condition. Early diagnosis can help prevent the potential consequences of airway compromise, sepsis, and extension to contiguous structures. The peak incidence occurs in 3- to 5-year-olds, likely due to the increased number of lymph nodes in the retropharyngeal space and the likelihood of atrophy of lymph nodes in this anatomic space as the child ages.

The retropharyngeal space is a potential space anterior to the prevertebral fascia that extends from the skull base to the bifurcation of the trachea in the mediastinum, serving as a potential pathway to the chest. Most cases of retropharyngeal abscess occur in children following an upper respiratory tract infection such as tonsillitis, pharyngitis, and lymphadenitis and probably represent spread of infection from contiguous areas. Some cases are idiopathic; the remainder (more common in older age groups) are due to trauma, foreign body ingestion, or immunocompromised state.

Infection nearly always is polymicrobial and commonly includes aerobes (Streptococcus viridans, group A Streptococcus, Staphylococcus aureus, S epidermidis) as well as anaerobes (Bacteroides, Fusobacterium, Peptostreptococcus sp). Throat swabs may not be useful and are likely to represent oropharyngeal flora. Additionally, many patients already may be receiving antibiotics at the time of diagnosis.

The clinical presentation of retropharyngeal abscess appears to be highly inconsistent; symptoms may include neck pain, neck swelling, fever, sore throat, and food refusal by younger patients. Limitation of neck movement (particularly with hyperextension) or torticollis seems to be an especially important clue. Respiratory distress or stridor occurs less frequently than commonly believed, and most patients do not appear “toxic.” Often, the differential diagnosis includes pharyngitis, cervical adenitis, meningitis, epiglottitis, and cellulitis.

Soft-tissue films of the neck may reveal prevertebral swelling, which can be determined quickly by comparing the width of the prevertebral soft-tissue plane to the corresponding vertebral body. This width should be less than one half the width of the corresponding vertebral body. More precise measurements are usually obtained at C2, where the soft-tissue space can be up to 22 mm in adults. However, the prevertebral space may appear falsely enlarged during neck flexion or crying. Computed tomography (CT) remains the best imaging method to confirm the diagnosis, although it has been demonstrated to have a low sensitivity (43%) and specificity (63%) in distinguishing between retropharyngeal abscess and cellulitis. CT scan is helpful to assess the extent of the infection and determine if it has spread to contiguous structures. However, such scans introduce issues of sedation (particularly problematic if there are airway issues) and additional radiation. Ultrasonography of the affected region is technically difficult.

Traditional management of a retropharyngeal abscess has involved transoral surgical drainage. However, recent published pediatric reviews suggest that only 25% to 50% of patients require surgery; most pediatric patients can be treated successfully with medical therapy alone as long as there is no airway compromise. Thus, it may be appropriate to wait 24 to 48 hours while the patient is receiving broad-spectrum antibiotics before considering surgical intervention. Clindamycin remains the first-line antibiotic choice. Given the polymicrobial nature of this disease and the increasing frequency of resistance to clindamycin, it may be useful to expand antibiotic coverage to include either a third-generation cephalosporin or a beta-lactamase-resistant
penicillin in geographic areas where clindamycin resistance is present.

Comment: The diagnosis of retropharyngeal abscess can be challenging, and clinicians must keep it in their differential diagnosis. Although CT of the neck has become the gold standard in diagnosis, a lateral neck radiograph remains helpful for clinical sites where access to CT may be difficult or to help rule in the diagnosis when nonspecific signs or symptoms exist. Research studies have demonstrated the effectiveness and safety of initial treatment of children who have no airway compromise with antibiotics for 48 hours rather than immediate surgical drainage. These findings have advanced the treatment of retropharyngeal abscess and prevented many children unnecessary morbidity from exposure to anesthesia and surgical intervention.

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