

Laryngitis in Children

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Abstract

Laryngitis in children is an inflammatory condition of the larynx that most commonly develops as a complication of viral upper respiratory infections. Due to anatomical pediatric airway, even mild swelling can lead to significant breathing difficulties. The condition may range from mild hoarseness to severe airway obstruction, especially in cases of croup (stenosing laryngitis). This article provides a comprehensive overview of causes, pathophysiology, symptoms, diagnosis, treatment, and prevention of laryngitis in children.

Keywords: laryngitis, children, croup, airway inflammation, stridor, viral infection, hoarseness, respiratory distress, treatment, prevention.

Laryngitis in children is a common condition characterized by inflammation of the larynx, including the vocal cords. It frequently occurs as part of a viral infection such as influenza, parainfluenza, or other respiratory illnesses. Children are particularly vulnerable because their airways are narrower and more easily obstructed by swelling and mucus. As a result, symptoms can progress rapidly and may become serious if not managed properly.

The most common cause of laryngitis in children is viral infection. Parainfluenza viruses are especially associated with croup, a form of laryngitis that leads to airway narrowing. Other viruses such as respiratory syncytial virus (RSV), adenovirus, and rhinovirus can also contribute. In some cases, bacterial infections may develop although this is less common. Non-infectious triggers include allergic reactions, inhalation of irritants such as smoke or pollution, excessive use of the voice, and gastroesophageal reflux.

The underlying mechanism of laryngitis involves inflammation and swelling of the laryngeal mucosa. This swelling reduces the diameter of the airway, increasing resistance to airflow. In children, even a small reduction in airway size can

significantly impair breathing. The subglottic region is particularly prone to narrowing, which leads to the characteristic high-pitched sound known as stridor.

Clinically, laryngitis often begins with symptoms of a common cold, including mild fever, runny nose, and general fatigue. As the condition progresses, the child develops hoarseness or loss of voice. A distinctive barking cough, often described as “seal-like,” is a hallmark sign. Breathing may become noisy, especially during inhalation. Symptoms frequently worsen at night, and in more severe cases, the child may show signs of respiratory distress such as rapid breathing, chest retractions, and cyanosis.

One of the most important and potentially dangerous forms of laryngitis in children is croup. This condition is characterized by acute narrowing of the airway and can lead to significant breathing difficulty. Croup episodes often occur suddenly at night and may be frightening for both the child and caregivers. Without appropriate management, severe cases can result in respiratory failure.

Diagnosis of laryngitis is primarily clinical and based on the characteristic symptoms. In most cases, additional tests are not necessary. However, if the presentation is atypical or severe, further evaluation such as imaging or laboratory tests may be required to rule out other conditions like epiglottitis or foreign body aspiration.

Treatment depends on the severity of the condition. Mild cases can usually be managed at home with supportive care. This includes ensuring adequate hydration, providing warm fluids, and maintaining humidified air to soothe the airway. Voice rest is also recommended to reduce irritation of the vocal cords. Fever can be managed with antipyretic medications such as paracetamol or ibuprofen.

In moderate to severe cases, medical treatment is required. Corticosteroids are commonly used to reduce inflammation and airway swelling. Nebulized epinephrine may be administered in emergency settings to rapidly improve breathing. Antibiotics are not routinely used unless a bacterial infection is suspected or confirmed.

During an acute episode of breathing difficulty, it is essential to keep the child calm, as agitation can worsen airway obstruction. Exposure to cool or humid air may help alleviate symptoms temporarily. Immediate medical attention is necessary if the child shows signs of severe respiratory distress, persistent stridor at rest, or decreased responsiveness.

Preventive measures include strengthening the child's immune system, avoiding exposure to respiratory infections, and maintaining clean, humidified indoor air. Vaccination against influenza and other respiratory pathogens can also reduce the risk of developing laryngitis.

In conclusion, laryngitis in children is a common but potentially serious condition due to the risk of airway obstruction. While most cases resolve without complications, some may progress to severe forms requiring urgent medical care. Early recognition, appropriate management, and preventive strategies play a crucial role in ensuring a favorable outcome.

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