



British Paediatric Orphan Lung Diseases (BPOLD)

Obliterative Bronchiolitis - [Dr David Spencer](#)

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Definition

Obliterative bronchiolitis (OB) is an irreversible lung disease that occurs in children and adults after injury to the lower respiratory tract. There is concentric narrowing and distortion of the bronchiole walls caused by inflammation and fibrosis. The alveoli are not involved. OB should not be confused with BOOP (Bronchiolitis Obliterans with Organising Pneumonia) from which it differs clinically, radiologically and histologically, and in response to steroids (Ryu 2003).

Causes

OB is a typical finding in bronchopulmonary dysplasia and cystic fibrosis.

Causes of OB include infection, transplantation, connective tissue disease, toxic fume inhalation and aspiration. Many cases are idiopathic. The most common cause of OB in children is following acute viral lower respiratory tract infection, with adenovirus being the agent most commonly implicated.

Other agents associated with post-infectious OB include mycoplasma, measles, influenza and respiratory syncytial virus (Chan 2004).

Clinical Presentations

OB can be mistaken for asthma as some of the presenting symptoms such as cough, wheezing and dyspnoea are similar. OB should be suspected if symptoms persist, exercise intolerance is prolonged and respiratory symptoms are disproportionately severe to chest X-ray findings.

Investigations

Lung biopsy does not always confirm the diagnosis of OB because of the patchy distribution of disease and diagnosis is usually based on a combination of history, physical examination, chest X-ray, pulmonary function tests and HRCT. HRCT features may include "mosaic" shadowing emphasised in expiration, bronchial wall thickening, hyperlucent lung and bronchiectasis (Lynch 1999).

Treatment

Treatment of OB is mainly supportive, and includes antibiotics and physiotherapy plus oxygen therapy, if the patient is hypoxic. Many patients are treated empirically with bronchodilators and corticosteroids and responses may be variable. There have been no published randomised controlled trials of any treatment. Surgery may be an option for a small number of patients with severe localised disease and lung transplantation is an option in end-stage disease. The clinical course is very variable and the prognosis for any individual is often difficult to predict.

Useful references:



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