

Bronchiectasis

What is Bronchiectasis?

Bronchiectasis comes from the Greek words "bronckos" (airway) and "ektasis" (widening). The diagnosis of bronchiectasis is made using x-rays which demonstrate abnormal widening of the airways or bronchi. Despite its low profile, bronchiectasis is a common condition and patients will often have symptoms for many years before a diagnosis is made.

What causes it?

Bronchiectasis is caused by chronic infection of the airways. This infection is generally thought to be from bacteria. The persistent airway infection and the immune response results in chronic inflammation. This inflammation damages the lung and results in the symptoms of bronchiectasis.

What are the symptoms?

The main symptom is a chronic cough, producing mucus (sputum). Other important symptoms include sinusitis/nasal inflammation and fatigue. Less common symptoms include chest pain, shortness of breath and coughing up blood.

An important feature of bronchiectasis is periods of acute worsening of symptoms (usually diagnosed by a doctor as being an exacerbation). These episodes of worsening may be initiated by a head cold but often there is no clear cause. It is thought that these episodes are associated with increased infection and inflammation in the airways.

Most commonly, patients with bronchiectasis develop a productive cough either in early childhood or later in life (over the age of 50 years). Many patients who develop bronchiectasis later in life have been smokers who also have co-existent chronic obstructive pulmonary disease (COPD).

What tests do I need?

A chest x-ray may not always show changes suggestive of bronchiectasis. The diagnosis of bronchiectasis is now nearly always made using a CAT scan. A special form of CAT scan using high resolution (HRCT) is the best test available. Testing specimens of sputum may be helpful in identifying which germs are causing infection and allow for a sensible choice of antibiotic.

Other tests are used to detect deficiencies in immunity and the ability to resist infections. It is recommended that patients should have breathing tests from time to time to help monitor the progress of their condition.

What problems can develop?

Coughing can be embarrassing for teenagers and adults. The cough is usually due to accumulation of sputum within the airways and is most effectively treated with regular physiotherapy. Infection in bronchiectasis may be caused by many germs but in more longstanding cases, infections with staphylococcus and pseudomonas species may become a problem requiring special antibiotic therapy.

Coughing up blood may occur from time to time and usually indicates infection. Coughing up large quantities of blood is frightening although rarely serious. However, medical attention should be sought immediately if this occurs.

Patients with bronchiectasis commonly develop chest infections, as a result of minor upper respiratory tract infections such as the common cold. In patients with advanced bronchiectasis, breathlessness is a common feature particularly during times of infection.

What can be done about it?

The main aim of treatment is to decrease the airway inflammation and infection.

Management of this condition involves:

- Chronic disease management.
- Treatment of acute worsening or exacerbations.

Chronic disease management.

There are a number of therapies available to help manage bronchiectasis. Clearance of mucus/sputum from the chest is very important. In the majority of cases, symptoms can be very effectively treated with physiotherapy. An individual program can be developed with a physiotherapist and may include physical exercise, postural drainage of the chest, active breathing, huffing, coughing or other physiotherapy techniques.

Along with chest physiotherapy, patients benefit significantly from exercise. Exercise can be combined with the inhalation of a bronchodilator - a medicine which helps to open up the airways. Bronchodilator medicines include ipratropium bromide (Atrovent™), terbutaline sulphate (Bricanyl™), salbutamol (Ventolin™) and tiotropium bromide (Spiriva™).

Patients may be referred for pulmonary rehabilitation, which is a formal program run by allied health professionals to improve fitness and lung function. Regular vaccination for influenza and pneumococcal pneumonia are also recommended.

Cortisol (e.g. prednisolone) decreases inflammation but may make infection worse. Therefore it should not be first-line therapy and should be used if there is strong evidence of co-existent asthma. Corticosteroids can be given by inhalation (e.g. puffers) or occasionally as a tablet. In severe cases, oxygen may also be helpful. Further information about treatments may be obtained from a specialist physician.

This brochure is one in a series produced by Lung Foundation Australia to provide information on lung disease, its treatment and related issues.

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Please consult your family doctor or specialist respiratory physician if you have further questions relating to the information contained in this leaflet.

For details of patient support groups in Australia please call 1800 654 301.

Treatment of acute worsening/exacerbations

It is very important that when patients become acutely unwell from their bronchiectasis, they should seek early medical attention. Delay may result in much worse illness and a longer recovery time. Initial treatment usually involves the administration of 1-2 antibiotics and increased chest physiotherapy. Bronchodilator drugs may also be used. Acute treatment usually lasts 10-14 days. Sometimes when patients are very unwell, they need to be admitted to hospital for stabilisation.

Over time many patients learn to initiate therapy for exacerbations.

What happens over the years?

Patients tend to have ongoing symptoms but these can generally be controlled with treatment and the vast majority of patients live active independent lives. A small proportion of patients develop rapidly progressive/severe disease and for these patients more aggressive management and regular review by a respiratory physician are recommended.

Symptoms may become worse in older people. A very important feature of bronchiectasis is that it is a chronic condition and with professional guidance, patients become familiar with how to manage their lung condition. Health professionals may recommend treatment but patients will often know best what works for them.

Resources

National Asthma Council Australia <http://www.nationalasthma.org.au/>

Asthma Foundations of Australia <http://www.asthmaaustralia.org.au/>

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