Tracheo/bronchomalacia

This information sheet from Great Ormond Street Hospital explains the causes, symptoms and treatment of tracheo/bronchomalacia and where to get help.

When we breathe in and out, air passes into the nose and mouth, through the voice box (larynx) into the windpipe (trachea), which splits into two branches (right and left bronchi) one to each lung. Tracheomalacia and/or bronchomalacia are conditions where the trachea and bronchus are floppy and cannot stay open during breathing. The trachea and bronchi are made of incomplete rings of cartilage and if this cartilage is weak it cannot support the airway.

There are two types of tracheo/bronchomalacia:

- Primary tracheo/bronchomalacia occurs when the cartilage in the airway does not develop properly and is of poor quality.
- Secondary tracheo/bronchomalacia is due to abnormalities outside the trachea and bronchi, for example compression by an enlarged blood vessel or a mass in the chest.

What causes tracheo/bronchomalacia?

Tracheo/bronchomalacia is most often present at birth (congenital) and may be associated with other conditions. Currently, we do not know why the cartilage does not form properly.

What are the signs and symptoms of tracheo/bronchomalacia?

Usually the first signs are of increased noise, effort and rate of breathing. A baby may also suffer from blue episodes when drinking.
Children are at increased risk of developing chest infections and they may also find they can’t keep up with their friends as they have reduced exercise stamina.

In severe cases, it can cause continuous serious breathing difficulties.

How is tracheo/bronchomalacia diagnosed?

Doctors use a procedure called a bronchoscopy and bronchogram (B&B) to diagnose tracheo/bronchomalacia. This involves firstly, looking with a camera and secondly, taking X-rays once some contrast/dye has been put in the airway.

How is tracheo/bronchomalacia treated?

Treatment is dependent on the severity of the malacia seen on the B&B and the clinical symptoms affecting each child.

If the floppiness is mild, your child may grow out of the condition without treatment.

Some children may need to wear a mask while they are asleep which blows air into their airway keeping it open. This is called ‘continuous positive airway pressure’ or CPAP.

If the airway is being squashed by a vessel or organ nearby, surgeons may discuss an operation to relieve the pressure.

What happens next?

Relief from the symptoms of bronchomalacia may not be noticeable straight away. Your child will need to be monitored closely and attend a clinic regularly.

However, in many cases, children grow out of tracheo/bronchomalacia by school age and the wheeziness improves. Some children may have problems with strenuous exercise as they get older, but most children are able to live a normal day-to-day life.

If you have any questions, please call the Clinical Nurse Specialist (CNS) on 020 7405 9200 bleep 0059 or 020 7813 8348.

Compiled by the Tracheal Team
in collaboration with the Child and Family Information Group

Great Ormond Street Hospital for Children NHS Foundation Trust
Great Ormond Street
London WC1N 3JH

www.gosh.nhs.uk