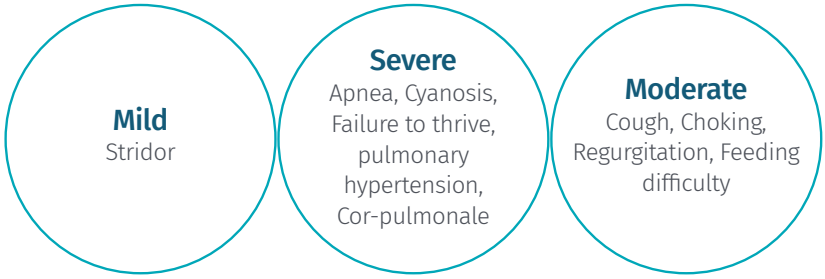
Laryngomalacia

By Dr Sebastian Ranguis, Otolaryngologist

Stridor in infants was acknowledged to be contributed by a narrowing of the airway as early as 1853 by French physicians Barthez and Rilliet. The most common condition causing stridor in infants was described as Congenital Laryngeal Obstruction by Sutherland and Lack in The Lancet in 1897. It was not until 1942 that Chevalier Jackson, one of the pioneers of modern Otolaryngology, coined the term Laryngomalacia to describe the immature floppy voice box leading to airway obstruction.

Laryngomalacia causes 60-70% of neonatal stridor with symptoms generally presenting in the first 6-8 weeks of life. The symptoms and signs range from mild with only the stridor noticed on examination, to severe cases where an infant demonstrates significant airway obstruction, work of breathing and cardiorespiratory complications.



Evaluation & Treatment

Evaluation involves taking a detailed peri-natal and post-natal history. This includes whether there were any ventilation requirements shortly after birth, the feeding history of the child including the need for a nasogastric tube and whether they have had all their scheduled vaccinations. On examination stridor will be heard and in general this will be an inspiratory stridor. Other signs of the impact on the airway obstruction should be assessed including work of breathing: respiratory rate, nasal flaring, head bobbing, tracheal tug, intercostal and subcostal recession, and pectus excavatum. The presence of head and neck haemangiomas will alert the clinician to the possibility of a subglottic haemangioma. The growth chart should be checked for failure to thrive.

The diagnosis is confirmed on fibreoptic nasendoscopic evaluation of the larynx. This procedure can be performed in the clinic without the need for sedation. If there are any other concerns for other causes of airway obstruction or if there is a clinical need to intervene then a laryngobrochoesophagoscopy (LBO) under sedation is performed in hospital. A sleep study can be useful to stratify the severity of the airway obstruction and to determine if further ventilation support is required

In most cases (90%) no surgical treatment is required. In moderate to severe cases treatment of associated gastroesophageal reflux disease will improve the airway condition and significantly improve symptoms. If, however, there is ongoing clinical concern impacting failure to thrive, cardiorespiratory compromise or multiple prolonged apnoeic episodes, then surgery in the form of a **supraglottoplasty** is required to improve the airway.

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