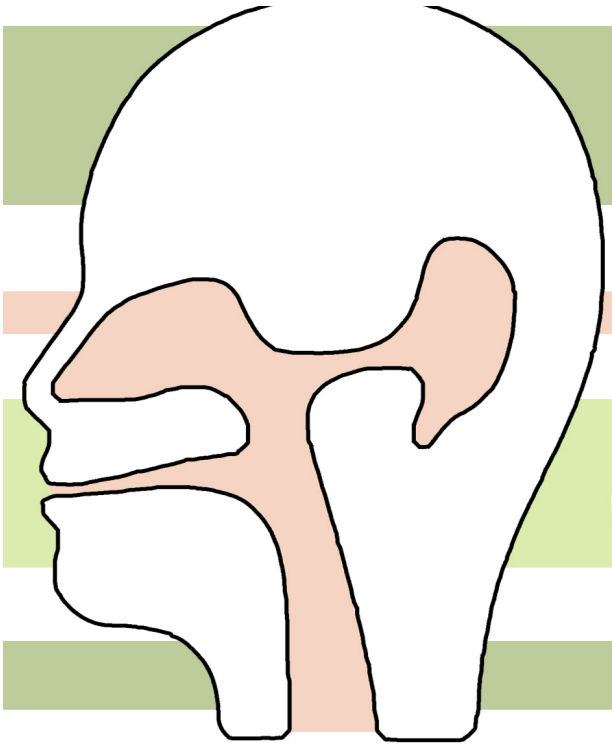

EAR, NOSE AND THROAT

Airway obstruction - OSCE

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Stridor history

Definition:

Stridor is an abnormal, high-pitched sound produced by turbulent airflow through a partially obstructed airway at the level of the supraglottis, glottis, subglottis, or trachea.

In all cases, **stridor** should be differentiated from **stertor,** which is a lower-pitched, snoring-type sound generated at the level of the nasopharynx, oropharynx, and, occasionally, supraglottis.

Stridor is a symptom, not a diagnosis or a disease, and it has three types:

- Inspiratory stridor suggests a laryngeal obstruction (supraglottic)
- Expiratory stridor implies tracheobronchial obstruction
- Biphasic stridor suggests a subglottic or glottic anomaly

In most cases of stridor, besides a complete history and physical examination, along with other possible additional studies, flexible or rigid endoscopy is required for an adequate evaluation of the etiology.

Differential diagnosis	
Aspiration of a foreign body	Stridor + History of chocking
Laryngotracheobronchitis (croup)	Biphasic stridor
Retropharyngeal abscess	
Peritonsillar abscess	
Epiglottitis	Biphasic stridor + muffled voice
Laryngomalacia	Most common cause of stridor in infants (Inspiratory stridor)
Subglottic stenosis	Biphasic stridor
Bilateral vocal cord paralysis	Biphasic stridor
Laryngeal web	Biphasic stridor
Subglottic hemangioma	Biphasic stridor
Respiratory papillomas	Biphasic stridor + hoarsness
Tracheomalacia	Expiratory stridor

Personal data:

Name
Age
Marital status
Occupation

General evaluation:

Birth history
Age of onset of stridor
- Gradual, or sudden
- Progressive or constant

Quality of stridor
- Inspiratory, biphasic, expiratory
- Positional
- Association with feeds

Voice quality
- Strength, hoarseness, and muffled

Cyanosis
Previous intubation
Previous neck surgery
Aspiration or reflux
History of chocking
History of infections
Dysphagia and odynophagia
Neck swelling
Drooling
Difficulty breathing
Reparatory problems
Aggravating and relieving factors (Does it improve in prone position ?)

Ask about the risk factors that is related to the differential diagnosis..

References:

- Airway obstruction lectures
- https://www2.luriechildrens.org/ce/pdf/sulman.pdf
- http://emedicine.medscape.com/article/995267-overview#a7

Snoring history

Obstructive Sleep Apnea

Obstructive sleep apnea (OSA) is characterized by episodic complete or partial upper airway obstruction during sleep, usually resulting in gas exchange abnormalities or disrupted sleep.

Adults:

Symptoms:

- Obstructive apneas, hypopneas, or respiratory effort related arousals
- Daytime symptoms attributable to disrupted sleep, such as sleepiness, fatigue, or poor concentration
- Signs of disturbed sleep, such as snoring, restlessness, or resuscitative snorts

Risk factors:

Age, gender (3 times more common in females), obesity, Craniofacial and upper airway abnormalities (an abnormal maxillary or short mandibular size, a wide craniofacial base, tonsillar hypertrophy, and adenoid hypertrophy), smoking, family history of OSA.

Medical conditions associated with OSA:

- Pregnancy
- Congestive heart failure
- End-stage renal disease
- Chronic lung disease, including asthma, chronic obstructive pulmonary disease (COPD) and idiopathic pulmonary fibrosis
- Stroke and transient ischemic attacks
- Acromegaly
- Hypothyroidism
- Polycystic ovary syndrome

Children:

Synptoms:
Habitual snoring, sleepwalking or sleep terrors
Nighttime: episodes of pauses in breathing, mouth breathing, nighttime sweating, restless sleep, nocturnal enuresis, parasomnias (eg. sleep terrors, sleepwalking, or confusional arousals)

Daytime: mouth breathing, hyponasal speech, may be defficult to awaken or complains of a headache in the morning, excessive daytime sleepiness.

Risk Factors:
Adenotonsillar hypertrophy
Obesity
Medical, neurological, or dental conditions that reduce upper airway size:

- Cerebral palsy
- Down syndrome
- Craniofacial anomalies (eg, retrognathia, micrognathia, midface hypoplasia)
- History of low birth weight
- Muscular dystrophy or other neuromuscular disorders
- Myelomeningocele
- Achondroplasia
- Mucopolysaccharidoses (eg, Hunter syndrome and Hurler syndrome)
- Prader-Willi syndrome
- Orthodontic problems (eg, high narrow hard palate, overlapping incisors, cross bite)
- Family history of OSA

Tests:
History, physical examination, and polysomnography.

Treatment:
OSA is a chronic disease that requires long-term, multidisciplinary management. The goals of therapy are to reduce or eliminate apneas, hypopneas, and oxyhemoglobin desaturation during sleep and thereby improve sleep quality and daytime function.
Weight loss and continuous positive airway pressure (CPAP) therapy are the cornerstones of therapy

References:

http://www.uptodate.com/contents/evaluation-of-suspected-obstructive-sleep-apnea-in-children
http://www.uptodate.com/contents/overview-of-obstructive-sleep-apnea-in-adults