**Respiratory Disease:**

**Issues to address with respiratory disease patient:**

1. Choice of anesthesia; uncooperative children or mentally retarded patients with respiratory disease who must be operated under GA
2. Use of steroids; like asthma patients who use systemic steroids

cortisone→ adrenal insufficiency→ infection susceptibility

1. Cross infection → specially TB
2. Positioning of the patient; some patients with respiratory disease can't sleep in the supine position

**Obstructive sleep Apnea**

**Definition:**interrupted breathing during sleep,, common in obese

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| **Cause**: upper airway obstruction as a result of excessive relaxation of the muscles of the palate and oropharynx **Risk factors:** -Obesity (most important factor)-Large tonsils -Patients with severe class 2 malocclusion -drugs that cause muscle relaxation(epilepsy)-Endocrine disease→ hypothyroidism and acromegaly -Alcohol and Smoking**Symptoms**: -Snoring in association with excessive day sleeping -Tiredness and Drowsiness -Morning headache -Poor concentration and memory-Anxiety and depression | **Diagnosis**:History and clinical features Sleep lab studies **Management**: -Lifestyle change; in relation to smoking and obesity -C-PAP; device that supplies the patient with oxygen while asleep **Dental management:** oral appliances that can reduce sleep apnea and snoring if the cause is oral like: -Mandibular Advancement Appliance; in case of a retrognathic mandible by protruding the mandible -Tongue retaining device: retains the tongue outward and downward to help open the airways -Soft palate lift device |

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| **Asthma:****Definition:**Chronic inflammatory disease with reversible episodes of bronchial obstruction **Types:**Extrinsic, Intrinsic

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| **Extrinsic**AllergenChildrenLess severe with age | **Intrinsic**Unknown etiology(stress, anxiety)AdultsMore progressive with age |

 **Mechanism of action:**chronic inflammatory response to eosinophils→ histamine→ airway obstruction**Triggers:**a) Airb) Exercise c) Emotional stressd) Drugs, like NSAIDs and aspirin **Clinical features:**cough, wheezing, chest tightness, unable to complete a full sentence is severe cases**Diagnosis:*** history and examination
* response to bronchodilators (beta 2 agonists)
* lung function tests (spirometry)
* skin prick test (to know if the patient is allergic to a certain substance)
* histamine provocation test

**Management:**- Depends on the severity- suppress the symptoms and reduce the frequency of attacks and hospital admissions - Avoidance of known trigger factors - Bronchodilators and inhaled steroids. - Drugs: oral leukotriene antagonists, theophylline (present in tea) and systemic steroids **Oral manifestations of asthma**:- Non specific, side effects of drugs→ xerostomia.patients will have: caries, candidal infection, periodontal disease, dental erosion…- Patients who experience asthmatic attacks, especially children, will have mouth breathing. As a result of mouth breathing, they will have increased lower anterior facial height, increased overjet…- Inhaled steroids cause local immunosuppression à candidal infection **Dental management:**- appointment in the morning, not very early not late- prophylactic inhalation before dental treatment- pt must bring his inhaler in case of asthmatic attack- reduce stress- pt on steroid inhalation must take prophylactic steroid cover- NSAID are contraindicated | **COPD****Definition:** irreversible airway obstruction **types** : Emphysema: dilation of terminal airspaces of the lung **(Pink puffers)**chronic bronchitis: productive cough for 3 consecutive months in last 3 yrs **(blue bloaters)****Causes:** smoking, genetics(alpha1 antitrypsin deficiency) **Mechanism of Action**Mucous gland hypertrophy→mucous secretions to precipitate in the alveoli → gas accumulation in the lungs → hypoxia and CO2 retention **Clinical features:*** - Chronic productive cough
* - Wheezing
* - Progressive breathlessness
* - Weight loss in some patients

**Diagnosis:**- History of chronic productive cough- Respiratory disease tests: pulmonary function tests, ABG (arterial blood gas), chest x-rays **Management:**- Avoid the risk factors- Bronchodilators- Oxygen supplies- Antibiotics to avoid chest infections- Chest physiotherapy- In severe cases à lung transplant **Oral manifestations:**- Like asthma, they are side effects of bronchodilators à dry mouth and its associations (caries, candidiosis…)- Some patients may have **central cyanosis**; color of lip and tongue appear bluish**Dental management:**· General anesthesia is risky in COPD patients· Patients may benefit from LA and sedation because they reduce stress· Some patients may need steroid prophylactic cover and oxygen during treatment  |

**Tuberculosis:**

**Definition**: Chronic infectious disease characterized by the formation of caseating granulomas in the affected organs, especially the lungs

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| **cause** bacteria called mycobacterium tuberculosis, and spreads through droplet infection **Risk factors:** - Living with someone who has TB- Alcohol- Diabetes - Immunosuppression and AIDS- hepatitis- IV drug abuse - some parts of Russia- Malnutrition - Prisons; crowded and malnutrition **Clinical features:** - Persistent cough- Weight loss- Night sweating  | **Diagnosis**: -Clinical features -Identification of mycobacterium through lung biopsy (neelsen staining)-PCR -tuberculin skin test (skin reaction to maltox protein injection)**Treatment:**chemotherapy (6-9 months)Anti-TB antibiotics, e.g rifampicin**Dental aspects:**single oral ulcersswelling of parotid glands saliva discoloration ( red because of refampin/refampicin)Consider TB cross infectionHepatitis is a risk factor  |

**Sarcoidosis:**

• Similar to TB, but is Non-caseating granuloma
• Multi-organ disease “specially the lungs” of unknown etiology with diverse clinical manifestations
• Oral manifestations include dry mouth and sometimes it is the first manifestation of the disease
• Other oral manifestations: swelling of salivary glands, intermittent swelling of lips and tongue, mucosal nodules or patches on skin and around the nose