**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   |  |  | | --- | --- | | **Extrinsic**  Allergen  Children  Less severe with age | **Intrinsic**  Unknown etiology(stress, anxiety)  Adults  More progressive with age |   **Mechanism of action:**  chronic inflammatory response to eosinophils→ histamine→ airway obstruction  **Triggers:**  a) Air b) Exercise  c) Emotional stress d) 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 ulcers  swelling of parotid glands  saliva discoloration ( red because of refampin/refampicin)  Consider TB cross infection  Hepatitis 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