

UNIT 9 - RESPIRATORY SYSTEM

Diseases and Disorders of the Respiratory System

A. Emphysema

Emphysema is one of the chronic obstructive pulmonary disorders. Emphysema is an irreversible enlargement of the air spaces distal to the terminal bronchioles due to the destruction of the alveolar walls. The result is decreased elastic recoil properties of the lungs. It is the most common cause of death from a respiratory disease in the United States. The number one cause of emphysema is smoking. Signs and symptoms include dyspnea, malaise, barrel-chest, prolonged expiratory periods with pursed lip breathing, and tachypnea. Treatment includes oxygen therapy, stopping smoking, and breathing techniques to help control the dyspnea.

B. Influenza

Influenza, or flu, is an acute, highly contagious viral infection of the respiratory tract. It occurs sporadically or in epidemics. It tends to affect school children most often, but has its most severe effects on the elderly. Transmission occurs from inhaling infected respiratory droplets or by contact with a contaminated object. The signs and symptoms include fever, chills, headache, malaise, myalgia, rhinorrhea, and a non-productive cough. Treatment usually includes bed rest, fluid intake, and mild analgesics to relieve the pain. There are some antiviral agents which are effective in treating the disease. Flu vaccines given in the fall are generally effective in reducing susceptibility.

C. Lung Cancer

Lung cancer is the most common cause of cancer in the United States. Lung cancer typically develops in the wall or the epithelium of the bronchial tree. The prognosis generally is poor. Lung cancer is attributable to the inhalation of pollutants, especially those found in cigarette smoke. There are no symptoms of lung cancer in the early stages. Later symptoms include dyspnea, hemoptysis, hoarseness, wheezing, and weight loss. Treatment may include surgery, radiation therapy, and/or chemotherapy.

D. Pneumonia

Pneumonia is an acute infection of the lungs which prevents gas exchange. Pneumonia can be caused by viruses, bacteria, or the aspiration of fluid. Treatment depends on the cause, but may include antibiotics for bacterial infections or antimicrobials for viral infections. Treatment also includes humidified oxygen therapy, adequate fluids, bedrest, and analgesics to relieve the pain. Vaccines are available for those who are elderly or have health problems to prevent the onset of pneumonia during the winter months.

E. Sudden Infant Death Syndrome (SIDS)

SIDS is a mystery killer which takes the lives of apparently healthy infants between the ages of four weeks and seven months. The exact cause is unknown but may be related to compression of the carotid artery that occurs when infants sleep on their abdomen. Diagnosis of SIDS requires an autopsy to rule out other disorders.

F. Tuberculosis

Tuberculosis, or TB, is a bacterial infection of the lungs is characterized by pulmonary infiltrates. People who live in crowded conditions or poorly ventilated areas are more likely to be infected. The incidence of TB has risen in the United States due to rising homelessness, drug abuse and HIV infection. The signs and symptoms of TB include fatigue, weakness, anorexia, weight loss, night sweats, and low grade fever. Treatment includes the use of medications that may continue up to one year in order to make sure the bacterial infection has been completely treated.