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Video Reflections

Tuberculosis or T.B. is a very contagious lung disease caused from the bacterium *Mycobacterium Tuberculosis*. When it is active in the body it can travel via lymph nodes and blood stream to any organ in the body, most often affecting the kidneys, bones, and brain. It is spread from person to person through airborne droplets such as sneezing, coughing, laughing and other forced respiratory actions. A person can also have latent or inactive T.B. in which they are not contagious. Latent T.B. can become active at any time that the person's immune system becomes weak causing them to then become contagious. Risk factors include being around an infected person, working where it is widespread, and having a weak immune system. T.B. is diagnosed through chest x-ray, sputum culture, IGRA test, and a TST test. Treatment for latent T.B. is focused on preventing it from becoming active. This is done through antibiotics Rifampin, Isoniazid, Pyrazinamide, and Rifapentine. Rifampin and Pyrazinamide should never be used together. Treatment for active T.B. also includes antibiotics Pyrazinamide, Isoniazid, Rifampin, and Ethambutol. These antibiotics are very dangerous to the liver and patients should follow their treatment plan as suggested by the HCP. The person should take all their medications as described to prevent resistance to the medication.

Chronic Obstructive Pulmonary Disease or otherwise known as COPD is a disease that hinders breathing by limiting lung airflow and becoming more severe over time. There are two different diseases under COPD that can often occur together. The first one is Emphysema and the second is Bronchitis. Early screening is the key before major loss of lung function occurs. Common causes of these disease are smoking, lung irritants, air pollution, dust, and chemical fumes. Signs and symptoms include a persistent cough for 3 or more months with a thick mucus/phlegm that is worse in the mornings. Shortness of breath especially when physically active. Tightening of the chest, frequent respiratory infections, wheezing, and fatigue. Diagnosis includes spirometry, chest CT or x-ray, and an ABG test. Although COPD is irreversible, there are ways to cope with the disease such as lifestyle changes and medications.

Pneumonia is an infection that inflames the air sacs in one or both lungs. Newborns, children under 2 years old, regular smokers, elderly population over 65, and people with a weak immune system are the most affected. There are multiple types of Pneumonia depending on where it came from and where the infection is located. Pneumonia can come from the community, the hospital, a viral infection, aspiration, or a ventilator associated cause. The bronchial tubes and 5 main lobes can be affected. Signs and symptoms include coughing with sputum, sweating, fever/chills, shortness of breath, increased rate of breathing chest pain that worsens with deep breaths or coughing, muscle pain, and fatigue. Diagnosis includes chest x-ray, CT scan, bronchoscopy, sputum and blood cultures, pulse ox, and auscultating the lungs. Treatment is drawing blood cultures before giving antibiotics, giving correct antibiotics within 6 hours after diagnosis. If Pneumonia is left untreated it can cause lung abscess and bacteremia which can lead to organ failure and sepsis. Prevention includes proper hygiene, vaccination for 65 years of age and older, and the influenza vaccine.

Chest tubes are inserted into the pleural space of the lungs to remove air or fluid and help the lungs re-expand. They can also be inserted into the mediastinum space located under the sternum to drain fluid from around the heart after cardiac surgery. A couple of reasons for having

a chest tube include pneumothorax or pleural effusion. The chest tube system has two different types of drainage. The first is a wet system that is regulated by the height of the water in the suction control chamber that is connected to the wall suction. When assessing this system, hearing, and seeing bubbles means it is working correctly. The other system is a dry system which does not have a water column connected to it, instead it uses a suction monitor bellow. The bellow can be adjusted by the dial above it. There should not be any bubbling for this system. Key interventions are to monitor the patient's respiratory status, monitor the drainage system, and to know how to fix whatever issues may arise. When removing the chest tube from the patient supplies will be gathered and often the nurse will assist the physician in the removal. Before removal the nurse will teach the patient about the Valsalva maneuver so when it is removed, they will know how to perform it helping prevent air from entering the pleural space. After removal, assess the patient's site of insertion for any drainage, monitor their respiratory status, and assess their pain.