

Respiratory Video Reflection IM3

The video over tuberculosis was highly informative when the speaker talked about the disease process, what part of the body it affects, and how its treated. Tuberculosis is caused by a bacteria called *Mycobacterium tuberculosis*. Initially, after first hearing about tuberculosis a few years back it was assumed to be strictly a pathogen that affected the lungs only. This video gave information regarding how other parts of the body and organs were affected by this disease, for example the kidneys. This disease is highly contagious and affects a large percent of the population in the world. After viewing the video, I learned that there is a vaccine for the disease called the BCG vaccine. Tuberculosis is spread via airborne droplets. An interesting fact about tuberculosis is that it cannot be spread by drinking after someone or kissing them. This is because the droplets must be inhaled and small enough to pass through to the smallest part of the lungs. Tuberculosis can be latent or active. A tuberculosis skin test can be performed which would tell the patient and provider if the person has the bacterium within their body. If the skin test is positive, the patient would have to move forward to more diagnostic testing to see if the disease is active or latent. Tuberculosis is predominantly diagnosed via sputum culture and is highly contagious.

COPD includes three chronic issues including chronic bronchitis, emphysema, and chronic asthma. All in which are caused by risk factors such as smoking, environmental exposure, genetics in some cases, etc. Chronic bronchitis is diagnosed by a productive cough for three months for at least two consecutive years. This disease arises from inflammation within the respiratory system that leads to excessive mucous production. The mucous follows the flow of gravity and pools in the alveoli. Due to this blockage, there is a decrease in area for gas exchange. Emphysema on the other hand, is diagnosed by spirometry (testing the lung function). This disease arises from damage to the alveoli causing a decrease in surface area and air trapping. This affects gas exchange in two ways, one being the decrease in surface area not providing as much space to exchange and the air trapping causes difficulty exhaling the carbon dioxide and other toxins. This leads to a barrel chest. An important take-away from emphysema is that it is progressive and not curable.

The video on pneumonia provided a good resource that talks about the pathophysiology, signs and symptoms, diagnostic testing, etc. Throughout this video, there were many refresher points that had previously been taught in the classroom. An example would be that testing is done primarily with a chest x-ray. There are many types of pneumonia. The first type is aspiration pneumonia. This is caused when someone breathes in solid or particles that are not air. This is especially true if the substance is emesis due to the acidic properties. The second type is community acquired pneumonia; this is caused by a pathogen called *streptococcus pneumoniae*. The same pathogen can cause another type of pneumonia, in which is called hospital acquired pneumonia. The difference between these two is hospital acquired occurs if the infection begins after 48 hours of being in the hospital. There are many other causes and types of pneumonia, these are just a few.

Sleep apnea is caused not by a pathogen but instead by an obstruction. Usually, this is caused by being overweight, adding additional weight to the airway when laying down. CPAP at night can help to relieve the issue with the obstruction and prevent periods of apnea. My biggest

take away from this video is that patients with sleep apnea feel fatigued in the morning and throughout the day.

The chest tube video was sweet and to the point. A few take aways I have on this subject would be how to assess them. For chest tubes, it is important to chest the line for kinks, keep the box below the level of the patient, check for bubbles and ensure the tube is properly placed. Overall, all of the videos were informative and gave a good insight into what we need to understand.