

Chronic obstructive pulmonary disease

Business



In what position would R. S.

Have the worst ventilation-perfusion matching? Chronic obstructive pulmonary disease (COPD) is one of the most common lung diseases and makes it very difficult to breathe. There are two main forms of COPD: Chronic bronchitis, which involves a long-term cough with mucus, and Emphysema, which involves destruction of the lungs over time. Most people with COPD have a combination of both conditions. Smoking is the leading cause of COPD. The more a person smokes, the more likely that person will develop COPD.

However, some people may smoke for years and will never get COPD.

In rare cases, nonsmokers who lack a protein called alpha-1 antitrypsin can develop COPD at an early age. Other risk factors that put a person at risk for COPD are: exposure to certain gases or fumes in the workplace, exposure to heavy amounts of secondhand smoke and pollution, and frequent use of cooking fire without proper ventilation. 1 . R.

S will show the classic symptoms of bronchiolitis COPD which are very similar to the symptoms of emphysematous COPD; these symptoms vary depending on the severity of the disease and are as follows. In patients such as R. S. with bronchitis COPD a productive cough, prolonged expiration, cyanosis, hyperventilation, polytheism, core pulmonary, fatigue, multiple recurrences of respiratory infections, trouble catching your breath, wheezing, and shortness of breath that gets worse with activity are all common symptoms. On the other hand, those patients who are diagnosed with

emphysematous COPED these symptoms will appear later In the course of the disease with the exception of prolonged expiration. 2.

R. S. ' S BAG results (PH = 7. 32, apace = 60 mm Hog, papa= 50 mm Hog, HCl - = 30 CEQ/L.) indicate that he is experiencing acute respiratory acidosis.

R.

S. Also has polytheism which is a rare blood disorder characterized by excessive red blood cell production. Polytheism Is a common complication of those with COPED, therefore the most probable cause for R. AS polytheism Is related to his COPED. This occurs In COPED patients as the body tries to compensate for the decreased amount of oxygen in the blood thus, producing more red blood cells to carry oxygen to the tissues. 3.

The goals of therapy for COPED are to prevent disease progression, relieve homonyms, Improve health status, prevent or treat complications and exacerbations, and reduce morbidity.

By combining pharmacological therapy using Diophantine and Diophantine is classified as a bronchiolar which can be used long-term to relieve airway obstruction in asthma, or in the case COPED. With proper teaching and use, Diophantine will increase the ease of breathing and help clear the lung fields in R. S. Long-acting μ -Zionists, such as collateral and foretell are recommended for the management of moderate to severe COPED by the National Asthma Education and Prevention Program.

Studies have shown that long-acting μ -agonists can decrease exacerbations and hospitalizations; improve symptoms, lung function, quality of life, and possibly mortality by providing the effects of a bronchodilator and an anti-inflammatory in the lungs. Treating R. S. Using both Salmeterol and a long-acting μ -agonist will allow R. S.

To breathe easier, and prevent complications, therefore increasing his quality of life. 4. Although these medications can help improve R. G's disease dramatically there are some cons associated with the use of them, as with many medications.

For example, Salmeterol can cause life-threatening reactions in some patients such as arrhythmias, tachycardia, angina, and palpitations. Beta-agonists increase the risk for adverse cardiovascular events such as myocardial infarction, congestive heart failure, cardiac arrest, and acute cardiac death.

Beta-agonists also increase heart rate and reduce potassium concentration. The risks involved with these medications should be compared against the benefits of use in patients with COPD. 5. Ventilation-perfusion matching refers to a state of equilibrium within the respiratory system.

The worst position for ventilation-perfusion matching for R. S.

would be standing. Standing up is the worst position for ventilation-perfusion because gravity will drain the blood to the lowest part of the lungs, and pull the lungs down toward the diaphragm compressing their bases. The gases

will rise to the upper portion of the lungs (apices) making the lungs more difficult to inflate, therefore making it more difficult to breathe.