

# Coad (coronary obstructive airway disease)

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## Chronic obstructive airway disease CHRONIC OBSTRUCTIVE AIRWAY DISEASE

Chronic obstructive airway disease (COAD) is a clinical term that refers to pathological conditions which lead to chronic and partial or complete obstruction of airway. These pathological conditions result to narrowing or blockage of the bronchial tree from any level lead to obstruction to airflow. Examples of conditions that could result to COAD include bronchial asthma, chronic bronchitis, emphysema and bronchiectasis (Siafakas 2007, p. 22). In this case study, a patient, Hall Keith an 83 year old is admitted in acute diseases department because of chronic obstructive airway disease. From his history, it was found out that he also has been suffering from asthma, hypertension, COAD, Stent X2 for cardiac illness and depression. In addition, he is a chain smoker. He is also chain smoker. From this, one is expected to deduce a management plan for him. First, a proper history regarding his condition has to be documented. Inquire about the history of breathlessness (Stockley 2007, p. 23). Inquire about when it started and its progression, duration, characteristic, aggravating, relieving features and link to exercise. In COPD, a patient feels quite normal when sited, but breathlessness sets in when starts some exertion is introduced. Ask about if got any history of chronic coughing, sputum production, haemoptysis, wheezing, and chest pain to ensure you are not missing anything in your diagnosis. Be keen on noting the characteristics of the cough and the sputum produced. In addition, be quite inquisitive on his smoking history. Ask about when he started smoking and for how long and calculate his pack years. Inquire about his occupational history to see if it might have been a contributing factor to the development of COPD (Stockley 2007, p. 23). In examination, it will be a

must to document his vital signs and put emphasis on blood pressure, pulse rate, and respiratory rate. Remember to check for signs of cyanosis, finger clubbing and other findings (Stockley 2007, p. 23). Also do a chest examination. Look at the general condition of the patient and record. In most cases they are usually breathless and using accessory muscles of respiration and breathe through pursed lips, may be cyanosed. On inspection of the chest, may overinflated and have the appearance of a barrel due to increased antero-posterior diameter. Lower ribs often move inwards on inspiration instead of the outward normal movements. The patient in most cases in usually got tachpnoea. On palpation, chest expansion is reduced and tactile fremitus reduced. On percussion it is hyper-resonant. On auscultation, breath sounds are reduced and might be polyphonic wheezes (Stockley 2007, p. 23). Concerning diagnosis of COPD, it starts from the history and physical examination findings discussed above. COPD is suspected in chronic smokers that present with chronic coughing, breathlessness, produce sputum, and increased tendency of developing respiratory infections like pneumonia (Stockley 2007, p. 24). Other investigations that can be performed include, chest X-ray, CT scan, lung function test and arterial blood gas analysis. In chest X-ray, one can deduce the barrel shaped lung that is over inflated. A chest X-ray could also show if the COPD was complicated by lung infections. In lung function tests, use spirometry to assess the level of obstruction. The normal FEV1 to FVC ratio is usually 70 percent. If the ratio is reduced, depicts the level of obstruction and can even be classified from stage 0 to stage 4. On giving bronchodilators, if FEV1 level increases, indicates airway obstruction is

reversible and vice-versa. An oximeter is sometimes used to assess the level of oxygen and carbon dioxide in the patient's blood. Other tests that can be done include the bronchial provocation test, tolerance testing and the exercise for de-saturation testing. Mucus culture can also be done to rule out lung infections, and in some cases, bronchoscopy done to visualize the airway. In treatment, bronchodilators are central in its management. Commonly used bronchodilators include B<sub>2</sub>-agonist, anti-cholinergics and theophyllines. In severe case, the patient can be given the bronchodilators and inhaled steroids. Ensure to put the patient on oxygen. Adjuncts to the treatment could include mucolytic agents, pneumococcal vaccines, and anti-tussives (Stockley 2007, p. 25). In management of the patient, nurses were faced with a number of problems like when the bronchodilator given did not have any response on the lung. In such, Methyl-xanthine was given (Siafakas 2007, p. 25). In addition, they were also faced with the problem on the nutrition to put the patient in. This problem was solved by the help of a nutritionist. Since the patient was a chain smoker, dealing with the side effects of withdrawal like depression was dealt with by giving antidepressants. When the patient stabilized after the 5 day stay in hospital, the patient was discharged after a checkup chest X-ray showed that the lung returned to near normal position and that breathing was normal, pulmonary infections treated and the patient seems to be improving (Siafakas 2007, p. 30). References Siafakas, NM 2004, acute exacerbations of chronic obstructive pulmonary disease, CRC Press, UK. Stockley, Robert 2007, chronic obstructive pulmonary disease, John Wiley & sons, New Jersey.