Nat. Volatiles & Essent. Oils, 2021; 8(5): 783 - 786

NVEO
Natural Volatiles & Essential Oils

Case Report on Management and Outcomes of Bilateral Plural Effusion with Pulmonary Edema

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ABSTRACT:

Introduction: Pulmonary edema is a rare but fatal clinical condition that occurs during the treatment of pneumothorax, pleural effusion, and collapsed lung following atelectasis. We describe this case to raise awareness of this uncommon complication and demonstrate ways to reduce the risk of it occurring. **Present complaints and investigation**: The male patient 64 year old who was apparently admitted in AVBRH on date 9/07/2021 with a chief complaint of breathing difficulty, shortness of breath, chest pain, dry cough, fever, difficulty with physical activity. She developed shortness of breath shortly after surgery and was diagnosed with bilateral pulmonary edoema and pleural effusion, as well as metabolic acidosis. Lying on the right shoulder, reaching, and lifting with the right arm worsened the pain. There being no history of trauma, fever, or numerous joint pain, it's worth emphasizing. **Main symptoms and important clinical findings :-** A 35 year old female admitted in Acharya Vinoba Bhave hospital on dated 9/07/2021 with a chief complaint of breathing difficulty, shortness of breath, chest pain, dry cough, fever, difficulty with physical activity. **The main diagnosis therapeutic intervention and outcomes :-** After physical examination and investigations ABG analysis and a chest radiograph are both performed. this case diagnosed as bilateral plural effusion pulmonary edema. **Nursing perspective :-**Fluid replacement that is DNS and RL monitoring the vital signs per hourly. Provide the Whole nursing care to the patient. **Conclusions:** This unusual complication was self-limiting, and the patient recovered normally. A high level of clinical suspicion is required to address this event so that proper rapid management can be implemented**.**

Keywords: - Pleural Effusion, Pulmonary Edema, Airway Obstruction.

Introduction:

Massive fluid extravasation in conjunction is much less common to develop as a result of pleural effusion. We describe this case to raise awareness of this uncommon complication and demonstrate ways to reduce the risk of it occurring. It is a common condition to have bilateral plural effusion with pulmonary edema. A pleural effusion, also known as water in the lungs, is the buildup of extra fluid between the layers of the plural outside the lungs. Sudden pulmonary edema is a medical emergency that requires immediate attention. Pulmonary edema is a condition caused by fluid buildup in the lungs.

This fluid builds up in the numerous air sacs of the lungs, making breathing difficult. Despite the fact that heart disease is the most common cause of pulmonary edema, fluid can build up in the lungs for a variety

of reasons, including pneumonia, exposure to certain toxins and medications, and trauma to the chest wall Unilateral pulmonary edema after atrial fibrillation ablation is unusual.[1]

Patient Information:

Patient specific information : A 35 year old female admitted in Acharya Vinoba Bhave hospital on dated 9/07/2021 with a chief complaint of breathing difficulty, chest pain, dry cough, fever, difficulty with physical activity. After physical examination doctor diagnosed this case bilateral plural effusion pulmonary edema.

Primary concerns and symptoms of the patient : Present case visited in Acharya Vinoba Bhave rural hospital at medicine ICU department on dated 09/07/2021 with chief complaint of breathing difficulty, chest pain, dry cough, fever, difficulty with physical activity.

Medical family and psychosocial history : Present case had no history no medical problem. She belongs to nuclear family she was mentally stable conscious and oriented to date time and place she had maintain good relationship with doctors and nurses as well as other patients also.

Relevant past intervention with outcome :

Clinical Findings :-The Patient was conscious and well oriented to date, time and place her body built was thin and she maintain good personal hygiene. Her blood pressure was 120/80mm/hg pulse rate was slightly increase and temperature also increase 38°c and breathing pattern is disturbed.in chest, chest pain present , tenderness present and swelling on lower abdomen.

This female patient with cardiogenic shock due to acute myocardial infraction. She had a clinical feature of plural effusion and pulmonary edema and heart failure in right side. ABG analysis and a chest radiograph are both performed. To relieve the symptoms of fluid overload, the patient was given a bolus dose of 40 mg furosemide intravenously. Clinical and radiological resolution within hours confirms the diagnosis of fluid overload caused by irrigation fluid extravasation. Although thoracentesis can be used to diagnose and treat pleural effusion, it is not always necessary.[2]

Timeline : Present case has no obstructive history but she had a cardiogenic shock due to acute non ST elevation myocardial infraction she has a clinical feature of plural effusion and pulmonary edema and heart failure in right side.

Diagnostic Assessment:- A case 35 year old female was admitted on AVRBH on the basis of patient history physical examination abdominal palpation and USG and other investigation patient was diagnosed the blood sugar was normal but meal was slightly increase urea serum was slightly decrease, hemoglobin was normal, total WBC are slightly increased. ABG analysis and a chest radiograph are both performed. this case diagnosed as bilateral plural effusion pulmonary edema

No challenges experience during diagnostic evaluation[3]

Prognosis :- Blood investigation show that present case slightly anemic WBC level is increased , in USG is normal.

Therapeutic Intervention:-Present case took the medical management of inj Pantop 40 mg OD, injection emset give 4mg TDS, injection hydrocord 100mg TDS, tablet 5mg OD, injection levoflox 500 mg frequency is OD. ABG analysis and a chest radiograph are both performed. To relieve the symptoms of fluid overload, the patient was given a bolus dose of 40 mg furosemide intravenously. Clinical and radiological resolution within hours confirms the diagnosis of fluid overload caused by irrigation fluid extravasation. Shock, coma,

and death can result from severe cardiorespiratory insufficiency. Some patients received no treatment at all, while others were given a oxygen, inotropic agents, digitalis, steroids, diuretics, bronchodilators, and sedatives are some of the modalities and drugs used. While thoracentesis can be used to diagnose and treat pleural effusion, it is not always required.[4,5]

No changes were made in therapeutic intervention.

Nursing perspective : IV fluid was provided to maintain the fluid and electrolyte balance monitor vital signs per hourly.

Discussion:

The patient was admitted to AVBRH hospital with a chief complaint of difficulty breathing, chest pain, dry cough, fever, difficulty with physical activity, weakness, fatigue, nausea, vomiting, and so on. The first step in evaluating a prolonged, undetected pleural effusion is to classify the pleural fluid as transudative or exudative. Light's criterion is the most effective method for distinguishing transudates from exudates.

Transudates are misclassified as exudates 15–30% of the time. False-positive exudates are more common in diuretic patients. Protein and albumin gradients in these patients can correctly identify the pleural effusion's transudative origin. Exudative pleural effusions are caused by cancer, pneumonia, tuberculosis, PE, fungal infections, pancreatic pseudocysts, and intra-abdominal abscess. In many cases, specialised pleural fluid testing can aid in determining the etiology of a pleural effusion. Adenosine deaminase or -interferon levels are used to diagnose pleural tuberculosis[6-8].

When lymphoma is suspected, flow cytometry can help with the diagnosis. Pleural fluid cholesterol and triglycerides can aid in the confirmation of a chylothorax diagnosis. Spiral computed tomography of the chest should be used to evaluate undiagnosed pleural effusions. These scans can detect parenchymal infiltrates and masses, pleural thickening and masses, mediastinal lymphadenopathy, and PE. A thoracoscopy and pleural biopsy are recommended if the diagnosis is still uncertain[9-10].

After myocardial infarction and stroke, acute PE is the third most common cardiovascular syndrome. It is a major cause of acute and long-term morbidity and mortality worldwide. Within the first 30 days, one-third of patients die from PE. Early detection and treatment have the potential to reduce mortality to one-tenth of what it is now. Pleural effusions are present in 19–61 percent of PE patients. PE is responsible for less than 5% of cases in most series of pleural effusions studied using thoracentesis. In a recent study, PE was found to be the cause of 1.8 percent of pleural effusion cases. Some of the possible causes of this discrepancy are as follows.[5]

CONCLUSION

Pleural effusions are a common complication of acute PE. It is critical to consider this option in the case of an undetected exudative pleural effusion presenting with pleuritic chest pain. These effusions are usually unilateral, but they can be bilateral, especially if there is thromboembolism present. Anticoagulant therapy is effective in treating pleural effusion caused by acute PE.

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