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**Research Article** **Published Date:- 2023-12-05**

## Stable COPD Picture through Exhaled Breath Condensate, Questionnaires and Tests. A Proof of Concept Study


Background: Changes in lung structures persist in stable Chronic Obstructive Pulmonary Disease (COPD), but their correlation with the clinical picture remains unclear. The purpose of this study was to assess the stable COPD picture via the relationship between exhaled breath condensate (EBC) particle concentration and the Saint George Respiratory Questionnaire (SGRQ), COPD Assessment Test (CAT), and six-minute walking test (6 MWT).
Methods: 12 stable COPD and 12 healthy subjects participated in the study. The EBC was collected with Rtube and analyzed using the Accusizer FxNano. Particle concentration was measured and correlated with the findings of the tools used to assess the health status and functional profile of COPD. The results' analysis was performed with the Spearman's test and the Mann-Whitney U - test.
Results: The COPD group presented a worse picture of health status and functional profile compared to the healthy group. Correlations were observed between components of the SGRQ and CAT. The two groups presented similar levels of EBC particle concentrations, but the number of small particles was higher in COPD subjects. A correlation of the EBC particle concentration with the activity and total score of the SGRQ was only observed in the healthy group.
Conclusion: The total particle number was similar in the COPD and healthy groups. A few correlations between the EBC particles and tools used were also observed. The use of EBC particle concentration to monitor COPD status cannot be claimed with confidence because of the small sample size. Further research is necessary, particularly in large-scale groups.


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**Opinion** **Published Date:- 2023-11-17**

## Pathogenesis is the Basis of the Doctrine of Acute Pneumonia and the Principles of its Treatment


Modern medicine has achieved phenomenal success in many areas, turning into a visual and tangible reality the embodiment of some phenomena that in previous years could only be read in works of science fiction.


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**Case Report** **Published Date:- 2023-09-25**

## Clinical Approach to Immunotherapy-induced Type 1 Diabetes Mellitus: A Case of Pembrolizumab Associated Insulin-dependent Diabetes in a Patient with NSCLC


As the introduction of immune checkpoint inhibitors in the treatment of various cancers is now proven to be already acquired knowledge, so does a new challenge arise for clinicians; the understanding, diagnosis, and management of the rarest adverse effects of immunotherapy. We present a case of type-1 diabetes Mellitus (T1DM) in a patient with non-small cell lung carcinoma (NSCLC) treated with pembrolizumab. Following ten cycles of treatment, our patient was diagnosed with T1DM after being admitted for diabetic ketoacidosis and stayed hospitalized in the ICU. Later, they continued treatment with insulin, having shown disease response to pembrolizumab, and resumed immunotherapy while on insulin. Immunotherapy-induced T1DM can sometimes occur with PD1/PD-L1 blockage therapies. It has a rapid onset, is characterized by insulin deficiency due to the autoimmune destruction of beta-cells, and usually presents itself with diabetic ketoacidosis. Unlike most of the other adverse effects of immunotherapy, glucocorticoids don't seem to be of therapeutic value, and insulin substitution is required. Regular glucose monitoring can be key to early diagnosis and prevention of hospitalization.


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**Case Report** **Published Date:- 2023-08-17**

# Cardiac Tamponade as the Cause of Pulmonary Edema: Case Report

Introduction: Cardiac tamponade is an emergency syndrome that requires fast diagnosis and treatment; otherwise patient follows obstructive shock and cardiac arrest.
Case report: A 70-year-old female was brought to the emergency department with hypoxemia. She had a history of progressive dyspnea over the past three weeks. Past medical history includes smoking. On physical examination: tachypnea, hypoxemia (SaO2 89%), jugular venous distention, arterial pressure 220/100 mmHg, heart rate rhythmic of 82 bpm. On pulmonary auscultation: diffuse and bilateral crackles. Lung ultrasound showed a bilateral B line and the echocardiogram demonstrated a pericardial effusion with signs of tamponade. A pericardiocentesis evacuated 620 ml of hemorrhagic fluid and the patient was transferred to the intensive care unit, hemodynamically stable, with SaO2 95%. At the ICU the echocardiogram, showed resolution of the cardiac tamponade and a tumor adhered to the lateral wall of the left ventricle. Chest CT demonstrated: a left lung tumor, infiltrating the pericardial sac. A pericardium biopsy demonstrated undifferentiated carcinoma.
Discussion: Cardiac tamponade diagnosis requires a high level of suspicion. Respiratory failure, chest pain, and shock, observed in cardiac tamponade, are also present in different diseases. The most common finding of cardiac tamponade is dyspnea (78% of cases). Our patient had dyspnea due to pulmonary edema, secondary to left ventricle diastolic dysfunction caused by the tamponade. A bedside echocardiogram made the diagnosis of cardiac tamponade and guided the effective pericardiocentesis.
Conclusion: Cardiac tamponade must be suspected in all cases of acute dyspnea. Echocardiogram is the method of choice for the diagnosis and for guiding the pericardiocentesis.