Cardiac Arrest in a Patient with Mild Bilateral Pleural Effusion: A Case Report

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ABSTRACT

Introduction: Cardiopulmonary arrest is the termination of blood circulation caused by a diversity of causes, some of which have recently been identified, such as opioid overdose and congenital heart abnormalities. Etiology of the condition includes both in-hospital and out-of- hospital causes, such as myocardial infarction, cardiac arrythmias, pulmonary embolism, massive pleural effusion, cardiac tamponade, hypoxia, and others. Patients are found unresponsive, and the specific cardiopulmonary resuscitation pathways are initiated according to whether the patients display ventricular fibrillation/ventricular tachycardia rhythm or pulseless electrical activity/asystole rhythm. In many cases, cardiac arrest is a preventable condition, when reversible causes such as hypoxia, acidosis, thrombosis, and hypothermia have been avoided.

Our case study will serve to present the first case of mild bilateral pleural effusion in a patient with no other predisposing reversible causes of cardiac arrest.

Case: Our case serves to describe and analyze the etiologies of cardiopulmonary arrest in a patient with long standing, bilateral pleural effusion. Being the first case in the literature to describe such a correlation, our case study aims to exclude and provide a connection between mild effusion and cardiac arrest, while demonstrating that reversible causes of cardiac arrest have been excluded. The case further demonstrates the clinical and radiological evidence and highlights the literature studies that have described effusions that have led to cardiac arrest. This will further add to the existing literature by making researchers consider future risks associated with untreated mild bilateral effusion.

Conclusion: Although cardiopulmonary arrest is frequent, its association with bilateral pleural effusion has not yet been evaluated. Our case shows a potential etiology that must be considered when explaining complications of untreated pleural effusion to the patient and serves as an opportunity for future research to evaluate the potentiality of mild pleural effusion in causing cardiac arrest.

Keywords: Cardiopulmonary arrest, Pleural effusion

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