Everything You Need to Know About COPD and Pulmonary Edema

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COPD and Pulmonary Edema

If you have COPD, undoubtedly your physician lectures you at each appointment about taking your medications as prescribed. You probably walk out the door with a list of symptoms about when to call the nurse, and when to go to the emergency department.

Why?

Because COPD has a laundry list of complications. The most common complication is, of course, a COPD exacerbation. But there are many other things that go wrong if you do not take care of yourself (and even if you do take care of yourself!)

Today, we're going to discuss pulmonary edema, a life-threatening, medical emergency.

What Is Pulmonary Edema?

On a very basic level, pulmonary edema is what it sounds like – swelling of the lungs. But it is a bit more complicated than that.

Lungs are filled with tiny sacs, which are called alveoli. When we breathe, these alveoli are meant to expand and take in oxygen and release carbon dioxide. When you have pulmonary edema, the lungs fill with fluid – and the alveoli also fill with fluid, preventing adequate gas exchange.

Pulmonary Edema Causes

There are two types of pulmonary edema:

Heart-related (Cardiogenic) Pulmonary Edema

This type is more likely to occur if you have COPD, as it occurs as a result of certain medical conditions that frequently happen with COPD.

With cardiogenic pulmonary edema, a diseased or overworked left ventricle is unable to pump enough blood, causing the pressure to increase in the left atrium, as well as the veins and capillaries in the lungs. This causes the fluid to be pushed through the capillary walls and into the alveoli.

This most often occurs in people with coronary artery disease, cardiomyopathy, those with heart valve problems, and those with hypertension.

Non-Heart-Related (Noncardiogenic) Pulmonary Edema

As the name implies, this type of pulmonary edema does not occur as a result of a heart condition. It happens because the capillaries themselves become leaky – even without a buildup of pressure.

This could occur due to acute respiratory distress syndrome (ARDS), being in a high altitude, exposure to certain toxins, a neurologic condition, an adverse drug reaction, a pulmonary embolism, a lung injury, a viral infection, or a near drowning.

Pulmonary Edema Symptoms

Pulmonary edema can be either ***acute*** (meaning that it is occurring emergently and is life-threatening) or ***chronic*** (meaning that it is occurring over a period of time – this doesn't necessarily mean that it is isn't fatal, but it is occurring more slowly, and you need to know the symptoms.)

Acute pulmonary edema symptoms include:

- Coughing up pink, frothy sputum.
- Sudden shortness of breath.
- Having a sudden trouble breathing, coupled with sweating.
- Breathing that sounds bubbly.
- Skin that is turning blue or gray.
- Feeling lightheaded, dizzy, weak, or sweaty – this may mean a sudden reduction in blood pressure.

Again, acute pulmonary edema is a medical emergency.

Chronic pulmonary edema symptoms include:

- Fatigue.
- Rapid weight gain.
- Wheeziness.
- An increase in breathing problems, especially during physical activity.
- Swelling of the lower extremities.
- An increase in shortness of breath while lying down.
- Waking up at night with breathlessness.

Pulmonary Edema Treatment

The treatment of pulmonary edema is highly variable. It will depend on many different variables. How advanced is your pulmonary edema – for example, did you seek treatment right away, or did you wait? It will also depend on the cause of your pulmonary edema.

Initially, your medical team will focus on stabilizing you. This will mean ensuring that you have a patent airway. You will likely receive oxygen, whether it means administering oxygen through a cannula in your nostrils, through a mask, or even intubating you – which means placing a tube in your throat. Once your team is sure that you can breathe appropriately, they will try to figure out what is causing your pulmonary edema, and reverse the cause, if they are able.

Once they have reversed the cause, or have begun the process (if they are able), they will attempt to lower the pressure in your heart and lungs (or they may have been doing this simultaneously) by administering a diuretic. A diuretic reduces pressure by removing fluid from the heart.

Once you are doing better, education is important. This can prevent pulmonary edema from occurring again. The education will be focused on the specific cause of your pulmonary edema.