Journal of Allergy & Therapy
ISSN: 2155-6121
OPEN ACCESS Freely available online

Editorial

Consequences and Causes of Acute Respiratory Distress Syndrome [ARDS]

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Summary

Acute Respiratory Distress Syndrome (ARDS) occurs when fluid builds up in the tiny, elastic air sacs in lungs. The fluid keeps the lungs from filling with enough air, which means less oxygen reaches the bloodstream. This deprives the organs of the oxygen they need to function.

Keywords: Acute Respiratory Distress Syndrome; Sepsis; Coronavirus disease 2019; Severe pneumonia

EDITOR NOTE

ARDS typically occurs in people who are critically ill. Severe Shortness Of Breath (SOB)-the main symptom of ARDS-usually develops within a few hours to a few days after the precipitating infection or injury. The risk of death increases with severity of illness and age. Of the people who do survive ARDS, some recover completely while others experience lasting damage to their lungs.

SYMPTOMS

The signs and symptoms of ARDS can vary in intensity, depending on its severity and cause, as well as the presence of underlying lung or heart disease. They include: SOB, Unusual rapid breathing, Low blood pressure, Confusion and extreme tiredness.

CAUSES

The mechanical cause of ARDS is fluid leaked from the smallest blood vessels in the lungs into the tiny air sacs where blood is oxygenated. Normally, a protective membrane keeps this fluid in the vessels. Severe illness or injury can cause damage to the membrane, leading to the fluid leakage in ARDS condition.

Causes of ARDS

Inhalation of harmful substances: Breathing high concentrations of smoke or chemical fumes can result in ARDS.

- The most common cause of ARDS is sepsis, a serious and widespread infection of the bloodstream.
- Accidents, such as falls or car crashes, can directly damage the lungs or the portion of the brain that controls breathing.
- Severe pneumonia affects all five lobes of the lungs.
- People who have severe COVID-19 may develop ARDS.
- Pancreatitis, burns and massive blood transfusions.

RISK FACTORS

- Most of the ARDS patients were already hospitalized for another condition, and many are critically ill. The condition is chronic, when infection spreads in the bloodstream.
- People who have a history of chronic alcoholism are at higher risk of developing ARDS.

COMPLICATIONS

- Lying still in the hospital, on a ventilator can increase the risk of developing blood clots, particularly in the deep veins in the legs. It leads to pulmonary embolism.
- In ARDS cases, a ventilator is used to increase oxygen in the body and force fluid out of the lungs. However, the pressure and air volume of the ventilator can force gas to go through a small hole in the very outside of a lung and cause that lung to collapse.
- Ventilator is attached directly to a tube inserted into the windpipe, this makes easier for microbial infection.
- Scarring and thickening of the tissue between the air sacs can occur within a few weeks of the onset of ARDS. This stiffens the lungs, making it even more difficult for oxygen to flow from the air sacs into the bloodstreams.

CONSEQUENCES

- ARDS patients recover most of their lung function within several months to two years, but others may experience breathing problems for the rest of their lives. Even people who do well usually have SOB and fatigue and may need oxygen supplementation at home for a few months.
- It can be treatable in ARDS treatments.
- Being hospitalized and on a ventilator can cause muscle weakness and may feel tired.

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Received: November 2, 2020; **Accepted date:** November 16, 2020; **Published date:** November 23, 2020

Citation: Didem Yalcin A (2020) Consequences and causes of Acute Respiratory Distress Syndrome [ARDS]. J Allergy Ther. 11: 231.

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