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Acute Respiratory Distress Syndrome (ARDS)

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Perspective

Acute respiratory distress syndrome (ARDS) occurs when fluid accumulates in your lungs' tiny, elastic air sacs (alveoli). Because the fluid prevents your lungs from filling with enough air, less oxygen reaches your bloodstream. This deprives your organs of the oxygen they require to function properly. ARDS is most commonly seen in people who are already critically ill or have significant injuries. The main symptom of ARDS is severe shortness of breath, which usually develops within a few hours to a few days of the triggering injury or infection. Many people with ARDS do not survive. The risk of death rises as one gets older and the severity of one's illness worsens. Some people who survive ARDS recover completely, while others suffer long-term lung damage.

Symptoms

The severity of ARDS signs and symptoms varies depending on the cause and severity of the disease, as well as the presence of underlying heart or lung disease. They are as follows:

- Extensive shortness of breath
- Breathing is laboured and unusually rapid.
- Blood pressure is low.
- Confusion and extreme exhaustion

Causes

Fluid leaks from the smallest blood vessels in the lungs into the tiny air sacs where blood is oxygenated, which is the mechanical cause of ARDS. This fluid is normally kept in the vessels by a protective membrane. Severe illness or injury, on the other hand, can damage the membrane, resulting in ARDS fluid leakage. The following are the underlying causes of ARDS:

Sepsis: Sepsis, a serious and widespread infection of the bloodstream, is the most common cause of ARDS.

Inhalation of harmful substances: Breathing in high concentrations of smoke or chemical fumes, as well as inhaling (aspirating) vomit or having a near-drowning episode, can cause ARDS.

Severe pneumonia: Pneumonia that is severe usually affects all five lobes of the lungs.

Head, chest or other major injury: Accidents, such as falls or car accidents, can cause direct damage to the lungs or the part of the brain that controls breathing.

Coronavirus disease 2019 (COVID-19): ARDS can develop in people who have severe COVID-19.

Others: Pancreatitis (pancreatic inflammation), massive blood transfusions, and burns.

Complications

Other medical problems can arise while you are in the hospital if you have ARDS. The most common issues are:

Blood clots: Lying in a hospital bed while on a ventilator increases your risk of developing blood clots, especially in deep veins in your legs. If a clot forms in your leg, a piece of it may break off and travel to one or both of your lungs (pulmonary embolism), where it can obstruct blood flow.

Collapsed lung (pneumothorax): In most cases of ARDS, a ventilator is used to increase oxygen in the body and force fluid out of the lungs. However, the ventilator's pressure and air volume can force gas through a small hole in the very outside of a lung and cause that lung to collapse [1-5].

Infections: Because the ventilator is connected directly to a tube inserted in your windpipe, germs can easily infect and injure your lungs.

Scarring (pulmonary fibrosis): Within a few weeks of the onset of ARDS, scarring and thickening of the tissue between the air sacs can occur. This stiffens your lungs, making oxygen flow from the air sacs into your bloodstream even more difficult.

References

1. Wang, Yan, Linlin Zhang, Xiuming Xi, and Jian-Xin Zhou. "The Association Between Etiologies and Mortality in Acute Respiratory Distress Syndrome: A Multicenter Observational Cohort Study." Front Med 8 (2021): 739596.
2. Zambon, Massimo, and Jean-Louis Vincent. "Mortality rates for patients with acute lung injury/ARDS have decreased over time." Chest 133 (2008): 1120-1127.
3. Shrestha, Gentle Sunder, Sushil Khanal, Sachit Sharma, and Gaurav Nepal. "COVID-19: Current Understanding of Pathophysiology." J Nepal Health Res Counc 18 (2020): 351-359.
4. Sedhai, Yub Raj, Mengdan Yuan, Scott W Ketcham, and Ivan Co, et al. "Validating Measures of Disease Severity in Acute Respiratory Distress Syndrome." Ann Am Thorac Soc 18 (2021): 1211-1218.
5. Sharma, Nirmal S, Charitharth Vivek Lal, Jin-Dong Li, and Xiang-Yang Lou, et al. "The neutrophil chemoattractant peptide proline-glycine-proline is associated with acute respiratory distress syndrome." Am J Physiol Lung Cell Mol Physiol 315 (2018): L653-L661.

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