COVID-19 Notice

Friday 10 April 2020

Acute respiratory distress syndrome

The latest update to the COVID-19: Guidance for Ambulance Trusts was issued widely on the 4th of April. The case definition was one of the key changes and this is reflected in the Appendix A: Covid-19 Risk assessment flow chart. The case definition is now:

Acute Respiratory Distress Syndrome **OR** High Temperature above 37.8 **AND** acute onset of the following:

- *Persistent Cough*
- *Hoarseness*
- *Nasal discharge or Congestion*
- *Wheezing*
- *Sore throat*
- *SOB*
- *Sneezing*

What is Respiratory Distress Syndrome?

Acute respiratory distress syndrome (ARDS) is a life-threatening condition where the lungs cannot provide the body's vital organs with enough oxygen. The underlying mechanism involves injury to cells of the lungs, with activation of the immune system and disrupts the body's regulation of blood clotting, both of which is a life threatening situation.

In effect, ARDS impairs the lungs' ability to exchange oxygen and carbon dioxide.

Symptoms of ARDS

The signs and symptoms of ARDS often begin within two hours of an inciting event, but can occur after 1–3 days. Signs and symptoms may include:

- *Shortness of breath,*
- *Fast breathing,*
- *Low oxygen level in the blood due to abnormal ventilation.*

Other common symptoms include:

- *Muscle fatigue and general weakness,*
- *Low blood pressure,*
- *A dry, hacking cough, and fever.*

What causes ARDS?

ARDS happens when the lungs become severely inflamed from an infection (eg. coronavirus) or injury. The inflammation causes fluid from nearby blood vessels to leak into the tiny air sacs in the lungs, making breathing increasingly difficult.

Assessment and management

Acute respiratory distress is a common and often serious emergency and should be assessed as per JRCALC and start correcting CABCD problems within your scope of practice, with a time critical transfer to appropriate receiving hospital as per the guidance. Five key signs you want to look for that suggest severe respiratory distress include:

1. *Retractions and the use of accessory muscles to breathe;*
2. *Inability to speak full sentences (or difficulty speaking be-tween breaths);*
3. *Inability to lie flat;*
4. *Extreme diaphoresis; and*
5. *Restlessness, agitation or declining level of consciousness.*

A patient with acute respiratory distress can tire quickly and increases the risk of respiratory arrest, presence of one or more of these warrants immediate intervention, because untreated respiratory arrest will lead to cardiac arrest.

1. *Decreased level of consciousness;*
2. *Inability to maintain respiratory effort; and*
3. *Cyanosis*

In summary

- *Assess the degree of breathlessness and response to treatment.*
- *Consider time critical transfer to hospital and pre-alert.*
- *Continue to monitor patient en route.*

By Chris Clarke 10 Apr 20