Respiratory Failure

Respiratory failure is a when the breathing (*respiratory*) system fails. This means your lungs are not working well. This happens when the lungs cannot take in enough oxygen or get rid of enough carbon dioxide. Acute respiratory failure may be life-threatening. If blood gasses are done, respiratory failure is present when the PaO2 value is less than 60 mm Hg while breathing air or the PaCO2 is more than 50 mm Hg.

SYMPTOMS

Respiratory failure commonly shows up with the following problems:

- Difficulty breathing (*dyspnea*).
- Rapid breathing (*tachypnea*).
- Shortness of breath with even mild activity.
- Bluish color of the skin (*cyanosis*), the skin beneath your nails, and mucous membranes (like the lining of the mouth).
- Confusion and drowsiness or sleepiness.

CAUSES

Any problem affecting the heart or lungs can be the cause of this. A few of the common causes are:

- Chronic bronchitis and emphysema (COPD).
- Blood clot going to lung.
- Pulmonary edema (water in the lungs).
- Collapse of a lung.
- Bronchiectasis.
- Any problem from muscles or bones that makes breathing difficult or nearly impossible.
- Pneumonia.
- Obesity.
- Asthma.
- Pulmonary embolism.
- Adult respiratory distress syndrome.
- Heart attack where heart cannot pump well enough.

DIAGNOSIS

This problem is often discovered by your caregiver while taking a careful history and performing a physical examination. The diagnosis of respiratory failure is then proven by doing arterial blood gas analysis. In addition to other blood work, further x-rays and specialized testing may be needed. The cause of the failure must be found early for best results and survival.

TREATMENT

In severe cases, the problem may cause you to need a respirator. A respirator is a machine that artificially breathes for you. You will determine which treatment is best for you or your loved one by discussing this with your caregiver. Some of the treatments used include:

- Oxygen (in hospital setting or for home use).
- Endotracheal tube and ventilator is used for a severe crisis. This is used to increase the amount of oxygen delivered, or to give the muscles needed for breathing a rest. Most ventilation is positive pressure ventilation. This means the breathing machine blows the lungs up much like you would blow up a balloon.

PROGNOSIS

Only so much can be done to keep the lungs working well enough to support life if they have been damaged beyond repair.

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