Mendelson's Syndrome

Mendelson’s syndrome is a condition caused by aspiration of gastric content, which leads to severe chemical pneumonia. Stomach content is very aggressive due its acidity and it might contain residues of food. If this fluid gets into the lungs, it damages them. Local injured blood vessels may leak blood fluid causing a condition known as the lung edema. The damaged lung tissue may become an easy target for bacteria and the chemical inflammation turns to infectious bacterial pneumonia.

Causes

The aspiration of gastric content may occur due to the disorder of epiglottis, which should protect the laryngeal area from aspiration. This can happen in general anesthesia during surgical procedures, in other cases of unconsciousness, in muscle paralysis in the neck region, etc. High risk of aspiration occurs also in CPR. CPR is performed in horizontal position in an unconscious patient and the repeated chest compressions may cause extrusion of gastric contents upward, where it is aspirated.
Scheme - Gastric fluid flows into the esophagus and then into the trachea, bronchi and finally into the lungs.

Symptoms

The main symptom is acute shortness of breath and cough. The lung infection (both infectious and non-infectious) manifests also with fever. Severe cases of Mendelson's syndrome are related to rapid deterioration of the overall patient's condition and they may be easily fatal.

Diagnosis

The condition usually occurs in a short time after CPR or after surgery performed under general
anesthesia. The blood tests may show signs of inflammation such as elevated sedimentation rate, CRP and white blood cell count. The lung damage and pneumonias can be visualized by chest X-ray or computed tomography.

**Prevention**

Planned surgical interventions can be performed after providing the patient with drugs decreasing the acidity of gastric juice (usually proton pump inhibitors). The best protective measure is, however, properly performed intubation. The intubation means insertion of a special tube into the airways. The tube is fixed with a special balloon and this measure totally divides the gastrointestinal and respiratory tract.

**Treatment**

Individuals with Mendelson's syndrome should be treated with extreme care. When acute respiratory failure develops, the patients should be put on mechanical ventilation. Bacterial pneumonias as complication of the Mendelson's syndrome should be treated by antibiotics.