Risk Factors and Preoperative Measures of the Pulmonary Aspiration and the chemical pneumonitis.

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Commentary

The entry of material from the oropharynx or gastrointestinal tract, such as pharyngeal secretions, food or drink, or stomach contents, into the larynx (voice box) and lower respiratory tract, is known as pulmonary aspiration. The substance can be inhaled or introduced into the tracheobronchial tree using positive pressure ventilation. The aspirated material is commonly referred to as "going down the wrong pipe" when pulmonary aspiration occurs while consuming food. Pulmonary aspiration can result everything from no harm to chemical pneumonitis or pneumonia, as well as death from asphyxiation within minutes. The volume, chemical composition, particle size, and presence of infectious agents in the aspirated material, as well as the person's underlying health status, all impact these effects.

Aspiration of small amounts of materials is typical in healthy people and rarely causes sickness or injury. Because of characteristics such as low conscious state and impaired airway defences, people with significant underlying disease or injury, especially hospitalised patients, are more likely to suffer respiratory problems. In healthy individuals, aspiration of small amounts of materials is common and rarely causes illness or injury. People with considerable underlying sickness or injury, especially hospitalised patients, are more prone to have respiratory issues after pulmonary aspiration due to characteristics such as poor awareness and reduced airway defences (gag reflex and respiratory tract antimicrobial defence system).

Aspirated material is more likely to end up in the right main bronchus or one of its subsequent bifurcations since its lumen is more vertical and slightly wider than the left. In 2013, there were approximately 3.6 million cases of pulmonary aspiration or foreign body in the airway. A variety of defensive reactions, such as coughing and swallowing, generally protect the lungs from aspiration. Only if the protecting reflexes are absent or severely weakened may significant aspiration occurs (in neurological disease, coma, drug overdose, sedation or general anaesthesia). Sitting patients up in intensive care lowers their risk of lung aspiration and ventilator-associated pneumonia. The easiest way to prevent aspiration varies depending on the situation and the patient. Tracheal intubation by a skilled health professional is the best protection for people who are at risk of aspiration. Laying the patient on their side in the recovery position (as taught in first aid and CPR courses) allows any vomitus produced by the patient to flow out.

To neutralise the stomach's low pH, some anaesthesiologists employ sodium citrate, followed by metoclopramide or domperidone (pro-kinetic drugs) to empty the stomach. Emetics are sometimes used in veterinary settings to empty the stomach before anaesthesia. Due to an increase in the number of patients who fail to follow fasting guidelines before surgery, some hospitals are now regularly providing emetics prior to anaesthesia. In newer operating rooms, separate vomitoria are frequently provided for this purpose. On an instrumental swallowing assessment, those with chronic neurological problems, such as those who had a stroke, are less likely to aspirate thickened fluids. However, this does not always imply a lower risk of pneumonia when eating and drinking in real life. Also, with excessively thickened fluids, pharyngeal residue is more prevalent; this can be aspirated and contribute to a more serious pneumonia. The location of abscesses caused by aspiration is influenced by one's position. Whether you're sitting or standing, the aspirate will end up in the right lower lobe's posterior basal segment. It flows to the superior segment of the right lower lobe when lying flat. It goes to the gradle if one is lying on their bottom left.

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