Deaths by Asphyxia

Asphyxia is classified as a lack of oxygen to the body that results in unconsciousness and possibly death. There are three categories of asphyxial deaths:

- suffocation
- strangulation
- chemical asphyxia

Suffocation

Suffocation results from failure of oxygen to reach the blood. Suffocation can be divided into four types:

- environmental
- smothering
- choking
- mechanical

Environmental asphyxia results from inadequate oxygen in the atmosphere caused by environmental conditions. Examples include being locked in a deep freezer where oxygen levels are depleted or in a trench or mine.

Smothering is a result of mechanical obstruction of the nose and mouth. The circumstances of the death could be homicidal, accidental, or suicidal. In a homicidal event, a subject would get smothered by having duct tape over his or her mouth and nose. In an accidental death, a baby might get wedged between a mattress and a wall. In a suicidal death, a plastic bag over the head would result in death.

Choking is the blockage of the internal airway. Most of the choking deaths are accidental. Most choking deaths involve young children, the elderly, the medicated, and the disabled.

Mechanical asphyxia occurs when there is pressure on the chest and abdomen that prevents exhaling and inhaling. Most of these deaths are accidental. Overlay is an example of mechanical asphyxia. It can occur in an infant or small child in a cosleeping arrangement with a parent or guardian. Sometimes, a portion of the parent's body lies across the chest or abdomen, preventing the child from breathing. Another form of mechanical asphyxia is positional asphyxia. In positional asphyxia, the body is in an unusual position, making breathing difficult.

Strangulation

Strangulation is the occlusion of blood vessels in the neck from an external cause. The types of strangulation are hanging, ligature, and manual. The carotid arteries need only 11 pounds of pressure to become fully occluded. After complete occlusion,
unconsciousness will occur in 10–15 seconds.

Hanging deaths are a result of the weight of the body tightening a noose around the neck, which occludes the vessels in the neck. For a successful hanging, the body does not have to be fully suspended. A noose could consist of a dog collar, belt, rope, or cord. The noose will create a furrow on the external portion of the neck. The furrow will be shaped as an inverted V shape. Autoerotic asphyxia is classified as a type of hanging. Autoerotic asphyxia is performed to increase personal sexual arousal.

Ligature strangulation is pressure applied to the neck by a ligature—a force other than the body. The force is usually applied by the hands. The ligature occludes the blood vessels in the neck. The ligature mark tends to be horizontal around the neck, as opposed to the inverted V shape seen in the hanging.

Manual strangulation is the occlusion of the blood vessels in the neck caused by hands, feet, or forearms. It is common to see abrasions or contusions on the neck. During the autopsy, hemorrhage will be present in the strap muscles of the neck.

Another type of asphyxia is chemical asphyxia. In this type, gases prevent the use of oxygen. Examples of such gases might involve carbon monoxide, methane gas, and nitrous oxide.