**PROBLEMS IN EMBALMING: CYANIDE POISONING**

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**ABSTRACT**

“Cyanide is used as a suicidal agent but also as a homicidal agent, particularly among healthcare and laboratory workers, and it can potentially be used as a terrorist attack. It is also still used in cases of illegal euthanasia” (Masshoff, Kirschbuehl, & Madia, 2011, p. 1). Although cyanide poisoning deaths are rare in the United States today, there are still people who have ready access to the poison through their occupations. These occupations include chemists, jewelers, those involved in pest control, mineral refining, photography, electroplating, dyeing, printing, and salmon poaching (Gill, Marker, & Stajic, 2004). The purpose of this research is to inform funeral professionals, or anyone interested, what cyanide poisoning is, how death from it occurs, how to detect it in postmortem remains, how it poses a problem for embalmers, and what embalming techniques can be used to treat it. Being able to determine postmortem identifying factors of cyanide poisoning without autopsy confirmation can be beneficial toward treating it correctly. With this knowledge, embalmers can then treat the deceased to look how the deceased’s family remembered them.

**OBJECTIVES**

- Inform funeral professionals, or anyone interested, what cyanide poisoning is
- Inform how death from cyanide biologically occurs.
- Inform how to detect cyanide in postmortem remains.
- Describe how cyanide poses a problem for embalmers.
- Suggest embalming techniques which can be used to treat cyanide poisoned remains.
- Being able to determine postmortem identifying factors of cyanide poisoning without autopsy confirmation can be beneficial toward treating it correctly.

**CYANIDE IN OUR HISTORY**

World War II: Holocaust

- January 30, 1933 – May 8, 1945
- Hydrogen cyanide gas (Zyklon-B) was used as a lethal gas during World War II. Zyklon-B pellets would vaporize when exposed to air. Originally intended for commercial use as a disinfectant and an insecticide, the Nazis discovered through experimentation the gas could be used to kill humans (Gaucan, Raza, & Vijayaraghavan, 2010).

Jonestown Massacre

- November 18, 1978
- Potassium cyanide
- A community of mostly Blacks and women drank cyanide from paper cups of Kool-Aid as part of a mass suicide pact of the Jonestown camp. Adults and children died and fell around the main panorama. Jones himself was shot in the head, an apparent suicide. For days, the body count mounted, from 400 to nearly 1,000. The bodies were flown to the United States and later cremated or buried in mass graves (Ulmer, 1985).

Chicago Tylenol Murders

- September 1982
- Potassium cyanide
- “Seven people from suburban Chicago died after taking Extra Strength Tylenol capsules that had been maliciously adulterated with cyanide” (Wolfe et al., 1984, p. 1).

**WHAT IS CYANIDE?**

- Potassium cyanide
- September 1982
- Children
- Potassium cyanide
- November 18, 1978
- Jonestown Massacre

**WHAT IS CYANIDE?**

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**HOW CYANIDE KILLS**

- Cyanide leads to histotoxic hypoxia by poisoning the systems that utilize oxygen to create energy and preventing them from using the oxygen. Even though there is plenty of oxygen there, the cells experience a lack of oxygen and are affected as if there was too little/no oxygen available (Kauris, 2017).

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**HOW CYANIDE DEATHS AFFECT EMBALMING**

Unnatural conditions caused by cyanide include:

- Intense liver mortis (intravascular blood discoloration)
- Low blood viscosity
- Rapid postmortem staining
- Autopsies are often performed (Mayer, 2012).

**HOW CYANIDE DEATHS AFFECT EMBALMING**

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**FLUIDS TO USE**

**REFERENCES**


[9] 3 oz. of Rectifiant (1 bottle)

Drainage should be continuous until the livor mortis clears. Then, the body is placed in the embalming table. She

[10] 384 (oz)


**CONCLUSION**

Being educated on how to determine postmortem identifying factors of cyanide poisoning, without autopsy confirmation, will help embalmers consider cyanide poisoning as being a possible cause of death when they see certain postmortem discolorations or smell a certain “bitter almond” scent that is associated with cyanide (Gill et al., 2004). With this knowledge, embalmers can create a memory picture of the deceased that their loved ones can cherish.

**AKNOWLEDGEMENTS**

Special thanks to Dr. Thomas Shaw and the SIUC Mortuary Science and Funeral Service department for guidance in my research.