G18 Estimating Time of Death From Livor Mortis Patterns: A Case Presentation

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After attending this presentation, attendees will understand the forensic importance of recognizing patterns of lividity produced by articles of clothing and of documenting these patterns of lividity photographically. Patterns of lividity can be useful in estimating the time of death. Attendees will also come to appreciate how a pains taking analysis of postmortem photographs can have relevance to the application of the proper criminal charges.

This presentation will impact the forensic community and/or humanity by demonstrating how both scene photography and postmortem photography of the remains, when used in conjunction with computer resources, can be valuable in estimating the time of death. It also demonstrates that a careful analysis of patterns of lividity, even in postmortem digital photographs, can be important in providing evidentiary material for use in helping resolve important questions in criminal law.

Following this case presentation, the attendees will understand the forensic importance of recognizing patterns of lividity produced by articles of clothing and of documenting these patterns of lividity photographically. Additionally, it will be shown how these patterns of lividity can be useful in estimating the time of death. An understanding of the importance of postmortem photography as a tool in death investigation will be underscored. Attendees will also come to appreciate how a pains taking analysis of postmortem photographs can have relevance to the application of the proper criminal charges.

This case involves a 19-year-old white female who was a still-life photography model participating in a pornographic photo shoot in a studio in a small rural community. Following a photo shooting session, she voluntarily, orally took an unknown amount of a proprietary liquid morphine preparation and lay down to take a nap. While she was asleep on the bed, the photographer took some additional photographs and, later, by his own admission, performed sodomy on the individual while she was asleep. Approximately one hour later, he noticed that she wasn't breathing and called the local rescue squad. She was rushed to the hospital, where it was determined that she was pulseless, apneic, cold, and blue. It was determined by postmortem examination and toxicology that she had died from a lethal concentration of morphine, in combination with two other benzodiazepines, dextromethorphan in the presence of a residual concentration of cocaine and its metabolite, benzoylecgonine. Questions arose during the investigation concerning whether the decedent was alive and/or was capable of consent during the purported act of sodomy by the photographer.

Postmortem police scene photographs and digital photographs taken at the studio by the photographer while the decedent was asleep on the bed were reviewed. It was revealed that numerous patterned lividity markings, made by the decedent's clothing, had persisted for several hours after the clothing items had been removed. These photographs were matched up with the "date and time modified" column on the computer explorer window. They demonstrated that the decedent had expired at least more than an hour before the photographer admitted to sodomizing her. This finding was instrumental in showing that charges of non-consensual sexual assault, to include animate object penetration, were not appropriate in this case, because the decedent was already dead at the time the act of sodomy and digital insertion were performed.

Time of Death, Livor Mortis, Digital Photography

 ** Presenting Author*