



Pathology Biology Section – 2009

G121 Conducted Electrical Weapons — A Review of the Medical Literature

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After attending this presentation, attendees will have gained a working knowledge of the existing medical literature on conducted electrical weapons such as the TASER X26.

The presentation will impact the forensics community by improving knowledge of the existing medical research on conducted electrical weapons which may be important especially for those who make determination of death decisions.

Conducted electrical weapons are used to control violently resistive subjects. The devices discharge a small electric current that stimulates both afferent sensory neurons causing pain and efferent motor neurons causing involuntary sub-tetanic muscle contraction. The use of these devices is growing in the United States since it fills a large void in the use-of-force continuum. There is controversy in the lay press and medical literature regarding the use of these weapons and the sudden, in-custody death phenomenon. Some groups have claimed that these devices have caused several hundreds of deaths. This presentation is a review of the existing medical literature on these devices. By attending this presentation, attendees will develop a comprehensive understanding of the existing medical literature on conducted electrical weapons and will develop and understanding of questions that remain to be answered. The existing animal studies, case reports, and human prospective studies will be examined. The focus will be particularly on the existing prospective human research.

The presentation will examine issues such as cardiac safety, respiratory effects, and the impact of the devices on other physiologic parameters such as blood chemistries, pH, stress markers, and temperature. The presentation will examine the use of these devices in the presence of cocaine, and in the presence of cardiac pacemakers and internal defibrillators. The difference between animal data and human data will be discussed.

It is important for the forensic community to be knowledgeable about the existing research and the questions that are still not answered, particularly those individuals who make determinations of cause of death.

Conducted Electrical Weapon, TASER, In-Custody Death