C20 Lethality of TASERs− The Canadian Experience

William J. Lucas, MD, and James T. Cairns, MB, DRCOG, Office of the Chief Coroner for Ontario, 26 Grenville Street, Toronto, ON M7A 2G9, Canada*

By attending this presentation, attendees will hear about the Canadian experience with deaths associated with the use of TASERs both in Ontario and other provinces and territories, and will understand the relative safety and non-lethality of this device when used to assist in taking control of aggressive individuals. The knowledge gained will assist death investigators in interpreting the correct cause and manner of death in these often-controversial cases, and may assist in advocating for a safe alternative to the use of firearms.

This presentation will impact the forensic community by demon- strating the impact of assisting death investigators to better understand the non-lethal consequences of TASER usage, and will encourage them to advocate for more widespread availability of this option to lethal firearms.

The TASER device has been the subject of a great deal of controversy because of its purported lethality, which this presentation will attempt to dispel. An overview of all known cases of TASER use in Canada where death has been temporally associated, along with a brief review of the TASER's mechanism of action and the history of availability of TASERs to Canadian police services will be presented. Canadian cases will be discussed, along with the conclusions for cause and manner of death, and the relative role played by the TASER in each case. Experimental studies that attempted to induce potentially fatal dysrhythmias will be summarized.

TASER usage by Canadian police services is a relatively recent phenomenon. For example, the Ministry of Community Safety and Correctional Services, the branch of provincial government responsible for policing services in Ontario, only in July 2002 approved use of TASERs for police tactical units and hostage rescue teams. In December 2003, approval was expanded to include Containment Teams and Front Line Supervisors. Despite this approval, many police services have been slow to embrace the technology and promote widespread usage.

Arguments against more widespread TASER usage have come largely from political activists and have included high costs of acquisition, alleged unproven safety profile, unknown long-term effects, and fear that the device will be misused by police. Any death involving some element of TASER usage by police has often been touted as yet another example of the device's lethality. In an attempt to better understand and clarify the dilemma, the Office of the Chief Coroner (OCC) for Ontario undertook a review of all known TASER-related deaths in Canada to attempt to establish whether there was a "cause and effect" relationship.

All cases included an individual presenting with aggressive behavior, many in a state of excited delirium precipitated by either drugs or a psy- chiatric condition. Following use of the TASER to subdue these individuals, all were restrained by police in one fashion or another, and sudden collapse occurred at least several minutes up to hours after the TASER shock. None became vital signs absent immediately, as one would expect if a potentially fatal dysrrhythmia had been induced by the TASER. All cases were determined to be a consequence of drug toxicity or complica- tions of excited delirium, rather than due to TASER use. The manners of death were therefore concluded to be Accidental, rather than Homicide.

To test the potential lethality of TASERs, studies were undertaken in collaboration with the Department of Cardiology at the Hospital for Sick Children, Toronto to determine whether the electrical shock delivered by the TASER would pose a risk for initiating potentially fatal cardiac dys- rhythmias. Because the high frequency current delivered by a TASER is similar to that used in therapeutic cardiac ablation procedures, it was hypothesized that the risk for inducing dysrhythmias should be similar. TASERing pig hearts did not produce any dysrhythmias, and hence these studies appeared to confirm that the risk for fatal dysrhythmias was non-existent.

Police have several use-of-force options open to them when dealing with agitated, aggressive individuals, including the use of firearms. "Less- lethal" options are frequently limited, and/or may have no effect on persons with excited delirium, leaving police to resort to the lethal option. In Ontario there have been seven fatal police shootings since January 2000. Some of these deaths might have been avoided had an effective, less-lethal option been available to the officers.

TASER deaths have been the subject of two inquests thus far in Canada, and several more are pending. In the one Ontario inquest con- ducted to date, the jury recommended authorization to carry TASERs for all front line police officers. This presentation seeks to add to the growing body of evidence regarding the effectiveness of TASERs as a less-lethal use-of-force option, and should assist forensic death investigators to advocate for more widespread use.

TASER, Lethality, Use-of-Force

 ** Presenting Author*