

**Commentary on:** Kunz SN, Zinka B, Fieseler S, Graw M, Peschel O. Functioning and effectiveness of electronic control devices such as the TASER<sup>®</sup> M- and X-Series: a review of the current literature. *J Forensic Sci* 2012; doi: 10.1111/j.1556-4029.2012.02167.x [Epub ahead of print].

Sir,

Given the continued controversy surrounding the effects of electronic control devices (ECDs), reviews of the latest literature on the topic such as Kunz et al.'s (1) are important. It is critical, however, to offer a balanced view of why controversy exists in the first place.

Many of the concerns raised in the literature about ECDs are not mentioned. The section on potential health risks, for example, does not discuss the most frequently cited theory of TASER-related death: acidosis (2). Furthermore, there is no caveat that the studies cited may inaccurately reflect what occurs in the field where additional variables like stimulant use may significantly change effects of ECD use (3).

The authors also conclude from a published abstract that the "direct correlation of causality [between ECD and death] could not yet be proven beyond doubt." It should be noted that recent studies have argued that such causality does exist beyond doubt (4) and the U.S. Federal Courts agree (5).

Finally and perhaps reflecting the omissions above, the paper's references come primarily from researchers whose conclusions have been drawn into question because of financial association with TASER International (6).

The absence of important components of the scientific literature may lead to an inappropriate sense of the safety of ECDs from this paper.

## References

1. Kunz SN, Zinka B, Fieseler S, Graw M, Peschel O. Functioning and effectiveness of electronic control devices such as the TASER<sup>®</sup> M- and X-Series: a review of the current literature. *J Forensic Sci* 2012; doi: 10.1111/j.1556-4029.2012.02167.x [Epub ahead of print].
2. Mesloh C, Henych M, Wolf R. Less lethal weapon effectiveness, use of force, and suspect & officer injuries: a five-year analysis. Washington, DC: National Institute of Justice, 2008.
3. Strote J, Hutson HR. TASER study results do not reflect real-life restraint situations. *Am J Emerg Med* 2009;27:747; author reply 747-9.
4. Zipes DP. Sudden cardiac arrest and death associated with application of shocks from a TASER electronic control device. *Circulation* 2012;125(20):2417-22.
5. *Betty Lou Heston, et al., v. City of Salinas, et al.* United States District Court for the Northern District of California, Case No. C 05-03658 JW.
6. Azadani PN, Tseng ZH, Ermakov S, Marcus GM, Lee BK. Funding source and author affiliation in TASER research are strongly associated with a conclusion of device safety. *Am Heart J* 2011;162:533-7.

Jared Strote<sup>1</sup> M.D., M.S.

<sup>1</sup>Division of Emergency Medicine, University of Washington School of Medicine, 1959 N.E. Pacific Street, Seattle, WA 98195.

E-mail: strote@uw.edu