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Blood factors of *Sus scrofa* following a series of three TASER[®] electronic control device exposures

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Abstract

In a previous study, 18 repeated exposures of anaesthetized swine to an electro-muscular incapacitating device (TASER International's ADVANCED TASER[®] X26 electronic control device) resulted in acidosis and increases in blood electrolytes. In the current study, experiments were performed to investigate effects of a more typical scenario of repeated exposures of the device on muscle contraction and changes in blood factors. Ten swine were exposed for 5 s, followed by a 5-s period of no exposure, three times. Selected blood factors were monitored for 3 h following exposure.

Transient increases in blood glucose, lactate, sodium, potassium, calcium, and pCO₂ were consistent with previous reports in the literature dealing with studies of muscle stimulation or exercise. Blood pH was decreased immediately following exposure, but subsequently returned toward a normal level. Oxygen saturation (measured by pulse oximetry) was not changed significantly.

In conclusion, three repeated TASER device exposures had only transient effects on blood factors, which all returned to pre-exposure levels, with the exception of hematocrit (which remained elevated after 3 h). Since the increase in this factor was less than that which may occur after short periods of exercise, it is unlikely that this would be an indicator of any serious harm.

Keywords: Blood; Electric injuries; Electronic weapons; Acidosis; TASER

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