Ronald K Wright, J Forensic Res 2017, 8:4 (Suppl)
DOI: 10.4172/2157-7145-C1-023

Investigating electrical deaths and injuries

Ronald K Wright
University of Miami School of Law, USA

Lightning deaths and injuries have occurred to humans since humans first appeared on this planet. Generated electricity, however, did not kill until 1871 when an electrician in Lyons, France was the first to die, it being said that he was killed by 200 v AC. AC or alternating current became the standard worldwide by the early 20th century. The Americas standardized on 60 Hz, or cycles per second, Europe on 50 Hz. As far as lethality is concerned, both are equally dangerous, as the human heart goes into ventricular fibrillation when trying to follow the pacemaker at either 3,600 or 2,500 cycles per minute. Techniques of investigating possible electrocution include an intense belief that a death is electrical if there is a source of electrical current and a pathway to ground. If there is such, then the death was electrical until proven it was not. The presence or absence of electrical burns is not dispositive of an electrocution as electrical burns can occur in dead bodies and 50% of deaths from electricity at low voltage (less than 600v) will not have electrical burns. This presentation will prepare the forensic pathologist to understand Ohm's law, which guides interpretation of electrical circuits, including those through a person, as well as electrical power generation, transmission and use.

rkwrightmd@gmail.com

Notes: