



G82 Cardioinhibitory Reflex Cardiac Arrest – Myth or Reality?: A Systematic Review From Cases

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After attending this presentation, attendees will be presented a systematic review of literature concerning reported cases of death by

cardioinhibitory reflex cardiac arrest due to short neck trauma and a proposal on how to diagnose it.

This presentation will impact the forensic science community by presenting constructive evidence based guidelines to diagnose death caused by death from a cardioinhibitory reflex due to short neck trauma will be proposed.

Background: Forensic physicians often evoke baroreflex cardiac arrest following short neck trauma as a cause of death. No clear evidence is available to support this hypothesis.

Objective: Construct evidence based guidelines to diagnose death caused by death from a cardioinhibitory reflex due to a short neck trauma.

Methods: A systematic review of the literature extracting case studies or reports from cases using [Medline, ISI Web of Knowledge, and Embase.] Two independent reviewers selected and extracted data. From the available data, the four authors then discussed the most probable cause of death for each case. A narrative approach was finally used to define conditions and procedures to be followed to evoke cardioinhibitory death.

Results: From the forty two cases (thirteen are anecdotes) which mention cardioinhibitory reflex as a possible cause of death, twenty two are most likely due to other causes (mechanical asphyxia, excited delirium and drug abuse). The twenty remaining cases were mainly men (15/20) and were from all ages (5 yrs to 74 yrs). From the fifteen who were autopsied, ten had local lesions at carotid bifurcation, seven had reported heart disease, and six were under the influence of alcohol.

Conclusion: Death should only be attributed to cardioinhibitory reflex when sequence of events are known, duration of trauma is certain, macroscopic and microscopic findings reveals important subsequent trauma lesions of the carotid bifurcation, and all other possible causes of death are excluded, including excited delirium, and cerebral hypoxia due to substance abuse. Such cases are apparently extremely rare.

Neck Trauma, Baroreflex, Death