

## H44 Neck Injuries Associated With Strangulation With Cable Ties

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**Learning Overview:** After attending this presentation, attendees will have an understanding of the distribution of neck injuries in deaths due to asphyxia caused by strangulation with cable ties. Attendees will also gain insight into how the injuries are distributed in cases where the manner of death is considered to be suicide compared to cases considered to be homicides.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by informing how attendees consider the postmortem examination of cases succumbing to strangulation by cable ties. Attendees will be provided guidelines for how the autopsy of such deaths should be performed, focusing on the description of the arrangement of cable ties around the neck and the importance of neck dissection. The overall aim is to provide a scientific basis for the forensic pathologists' postmortem evaluations of strangulations with cable ties.

All medicolegal autopsies performed in Sweden between 2002 and 2019 in which the death was associated with strangulation with cable ties around the neck were examined. In Sweden, virtually all cases of suspected unnatural deaths are subject to a medicolegal autopsy by the governmental agency, the Swedish National Board of Forensic Medicine. Cases with more severe decomposition will be excluded. The aim of this presentation is to describe neck injuries and characterize those injuries in relation to the manner of death, that is, suspected homicide or suicide. The distribution of age, gender, toxicology results, and possibly type of psychiatric illness in the suicide cases will be presented and correlated to the distribution of injuries. A guideline for which findings should be noted during the autopsy, especially concerning the arrangement of the cable ties, will be presented.

This presentation will highlight an area of death investigation—strangulation by cable ties—in which the scientific basis for the assessment of the manner of death is sparse. In order to characterize injuries in the neck associated with strangulation with cable ties, large case series are needed. In the practice of forensic medicine, it is important that scientifically derived material exists that presents the distribution of neck injuries related to the manner of death and the arrangement of cable ties around the neck. Once the cable ties are applied, they are virtually impossible to remove by force of hand. Hence, there may be no other physical evidence on the body of a possible struggle, and the only physical evidence available to the forensic pathologist in the estimation of homicide or suicide is that provided by injuries in the neck and by the arrangement of the cable ties.

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### Injuries, Strangulation, Cable Ties