



Pathology/Biology Section - 2015

H6 Adult Epiglottitis: A Case Series Review in an Autopsy Population

Maggie Bellis*, Ontario Forensic Pathology Service, 25 Morton Shulman Avenue, Toronto, ON M3M 0B1, CANADA; Jayantha Herath, MD, Ontario Forensic Pathology Service, 25 Morton Shulman Avenue, Toronto, ON M3M 0B1, CANADA; and Michael S. Pollanen, MD, Ontario Forensic Pathology Service, 25 Morton Shulman Avenue, Toronto, ON M3M 0B1, CANADA

After attending this presentation, attendees will be informed of the incidence, presenting complaints, and postmortem and laboratory findings in cases of sudden death due to acute epiglottitis in adulthood. Attendees will also be aware of what the main differential diagnoses are and how to distinguish one from another based on history, autopsy findings, and laboratory studies.

This presentation will impact the forensic science community by bringing awareness to pathologists and forensic pathologists of how this disease has now shifted from being a disease of children to a disease of adults and that it can often present with sudden death. This presentation will hopefully make attendees aware of the characteristic history and presenting complaints in these types of deaths and will guide decisions in ordering specific postmortem ancillary tests in order to make the correct determination regarding the cause of death.

Objective: This study was conducted to gain insight into the incidence of deaths in adults from acute epiglottitis and characterize the population affected, presenting symptoms, gross and microscopic features, and to discuss the main differential diagnoses at autopsy.

Method: A retrospective review was performed on medicolegal autopsy cases within the province of Ontario, Canada, in which the cause of death was given as epiglottitis between the years 2001 and July 2014 inclusive. Demographic features, clinical history, gross and microscopic autopsy findings, and the results of laboratory investigations were described. In total, 11 cases were identified.

Results: The incidence of acute epiglottitis as a cause of death was 1 in every 8,000 cases, or just under one case per year. The mean age of decedents was 50 years with a male predominance. Three were smokers; the most commonly reported concomitant diseases were diabetes mellitus, hypertension, hyperlipidemia, and chronic obstructive pulmonary disease. The most common presenting symptoms were sore throat, dysphagia, and low-grade fever with duration of symptoms ranging from several minutes to three days. All decedents complained of sudden shortness of breath before collapsing, except for one unwitnessed case. Three decedents had initially been seen by a physician and discharged home on antibiotics with a diagnosis of Streptococcal upper respiratory tract infection, only to collapse shortly thereafter. Gross postmortem findings included hyperemia and edema of the epiglottis and aryepiglottic folds with occasional swelling of the glottis and airway narrowing. Microscopy showed vascular congestion, stromal edema, and acute inflammation with a few cases also positive for the presence of stromal hemorrhages, abscess formation, and vasculitis. Five cases had positive blood and/or tissue cultures with a variety of organisms identified; Streptococcus was the predominant genus and in no case was *Haemophilus influenzae* isolated. Results from immunological tests performed in some cases were non-contributory.

Conclusions: Sudden deaths from acute epiglottitis in adults may be more common than previously appreciated. It should be kept in mind by forensic pathologists and hospital pathologists in cases of sudden death in which the presenting symptoms are consistent with an upper respiratory tract infection followed by an episode of acute shortness of breath. This study suggests taking blood and tissue cultures in cases with such a history in addition to serum for immunological testing to assist in differentiating the diagnosis when little more than a swollen epiglottis is identified at autopsy.

Epiglottitis, Adults, Autopsy