G1 Otologic Injury as a Consequence of Blast Trauma; Evaluated by Postmortem Otoscopic and Computed Tomography Examination

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After attending this presentation, attendees will recognize the pattern of middle ear injury from blast trauma and it's correlation with postmortem otoscopic findings and computed tomography results.

This presentation will impact the forensic community and/or humanity by providing a systematic evaluation of middle ear structures injured as a result of primary blast trauma. Techniques evaluated are intended to augment the routine gross and microscopic examination of victims of blast injury. The results of these studies will aid in the evaluation of patients status post injury and possibly assist in preventive measures in the appropriate setting.

The ear is one of the most frequently injured organs affected in an explosion. Otologic injury is a far more prevalent problem then has been previously reported. A more thorough evaluation of victims combined with an increase in both the number of civilian and military blast injuries cause us to recognize the extent of the problem. The short and long term sequelae of this type of trauma may include findings such as hearing impairment, tinnitus, and vertigo and cholesteatoma formation. A clearer understanding of the pattern and etiology of injury should benefit survivors in the planning of treatment strategies to optimize outcome. The techniques utilized in this study have enabled us to evaluate the mechanism and extent of injury to otologic structures.

Evaluation of middle ear injuries, postmortem, has been a laborious process. The current study provides two techniques that will provide additional information in the assessment of blast trauma. These techniques are useful in the evaluation of tympanic membrane perforation, hemorrhage into the middle ear and ossicular damage.

A series of cases is presented demonstrating the application of postmortem otoscopic examination and computed tomography to evaluate middle ear structures. These findings are correlated with the results of the corresponding circumstances of death.

Blast Injury, Otologic, Computerized Tomography Scan

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