F47 Forensic Odontology: Critical Expertise for a Search and Recovery Team

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The goals of this presentation are to: (1) learn how the forensic odontologist can contribute to a search and recovery team, (2) understand that forensic dental identification is a significant contribution during mass fatality incidents, as well as, criminal cases involving fragmented remains, (3) encourage the forensic odontologist to aggressively pursue opportunities to participate in search and recovery teams.

This session will present to the forensic community, how forensic odontology can make a significant contribution to search and recovery teams, and will impact the forensic science community by potentially facilitating and expediting identification of remains.

Fragmented remains are a challenge from the standpoint of identification. Identification techniques can include forensic dental, fingerprint, and DNA. Victims of the Rhode Island Nightclub Fire and the recent Comair airline crash in Kentucky were identified primarily by forensic dental identification.

Explosion, high velocity impact, and other forms of blunt force trauma and incineration can all result in fragmentation. The severity can range from various degrees of dismemberment to extremes, whereby, fragments measuring only centimeters or several millimeters are able to be recovered. The recovery process can be further complicated if the remains are incinerated or severely burned.

The recovery process will vary depending on the degree of fragmentation, as well as, the size of the debris field. In instances of severe fragmentation, a specialized, multidisciplinary team is indicated. This team should include not only an experienced forensic odontologist, but a forensic anthropologist, a medicolegal death investigator and forensic pathologist if available. A trained staff to aid in gridding and site excavation is also required. Once the debris field is excavated, the contents are sifted through screen to allow fragment visualization and recovery. The trained eyes of the forensic odontologist are essential to identify dental fragments, as well as, maxillofacial structures. Without the presence of a trained forensic odontologist on the team, the potential for loss of vital dental information is significantly increased.

Search and Recovery, Fragmented Remains, Forensic Dental Identification

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