G5 Multimodality Multidisciplinary Dental Identification in a High Stakes Case of Prior Misidentification

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The goal of this presentation is to illustrate the use of antemortem chart information, conventional radiographic examination, computer-assisted radiographic examination, alternate light photography, and dissecting microscopy used in a single case to finalize identification.

This presentation will impact the forensic science community by demonstrating that most dental identifications are relatively straightforward using comparison of antemortem to postmortem dental records. On some occasions, additional technology needs to be harnessed. This presentation details just such a case.

The identification of all persons is important as part of the autopsy process; however, there are instances in which identification of the deceased is the most important part of the autopsy procedure.

The Syrian conflict began in 2011 and continues to this day. Over one-quarter of a million people have died, and millions have been displaced. The combatants include persons of many nations fighting in numerous factions, including “terrorists” and foreign nationals fighting on various sides.

The body of a young male was traded from ISIS in exchange for an unknown reason. The deceased died at an unknown time, but had gone missing many months before recovery. At the time of recovery, the body was said to have been both autopsied and identified by dental record comparison in Iraq. When the body was returned to Canada, no autopsy had been performed and there was a reasonable concern that the returned body was not the deceased Canadian national.

For that reason, an autopsy was undertaken and a dental identification was requested. The identification was complicated by anatomic issues, continuity of dental evidence issues, and an apparent paucity of congruence between the antemortem information. Considering this, it was decided to return to basic comparison principles and maximize the postmortem information to compare to the records obtained in Canada. This process resulted in postmortem evidence that included Computed Tomography (CT) images, reformatted CT images, conventional dental clinical findings, alternate-light fluorescence photography, and full intraoral radiographs. Additionally, because some of the restorations were so conservative as to be nearly invisible, a dissecting microscope was used and highly refined photographs made to complete the postmortem evidence package. All of the postmortem information was compared to the properly sourced antemortem material, and an identification was finalized. The deceased was returned to his Canadian family properly identified.

Dental Identification, Alternate Light Photography, Computer-Assisted Tomography

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