H111 An Epidemiological Study of Trauma in U.S. Casualties of the Korean War

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After attending this presentation, attendees will better understand the relationship between paleopathological diagnosis of skeletal trauma and historical epidemiology. Attendees will learn the value of this approach as a tool for predicting and recognizing patterns of combat-related trauma.

This presentation will impact the forensic community by illuminating the relationships between paleopathology and epidemiology and their utility in the forensic identification process.

Data on antemortem and perimortem trauma was collected between 1996 and 2007 from more than 70 skeletons of U.S. casualties of the Korean War. While the CIL does not conduct analyses of perimortem trauma for medicolegal purposes—no judgments of cause or manner of death are asso- ciated with CIL identifications—skeletally visible antemortem traumata can be compared with individual biographical records, and perimortem traumata can be compared to historically documented circumstances of death.

These data were compared with three related data sets. The first set includes the records on file at JPAC for skeletons from putative U.S. casu- alties processed by the Central Identification Laboratory in Kokura, Japan, in 1953 and subsequently buried as Unknowns in the National Memorial Cemetery of the Pacific ("the Punchbowl"), Honolulu. Both perimortem and antemortem trauma were recorded during anthropological analyses of these remains. The second set is the electronic database CARIS (Centralized Remains Information System), maintained by JPAC, which contains biological profiles for all unresolved (and a few resolved) casualties of the Korean War, as well as other conflicts, including records of antemortem trauma. The third set includes the data tabulations of perimortem trauma in two separate studies of combat casualties in the Korean War.

Deaths in the Korean War, as in other conflicts, can be divided between those that occurred on the battlefield and those that occurred elsewhere. Logically, the causes of death may be expected to differ between these venues. For this reason, the JPAC-CIL sample consists primarily of those skeletons excavated in or around battlefield locations during the Joint Recovery Operations (JROs) conducted in the Democratic People's Republic of Korea from 1996 to 2005. These are supplemented by multiple skeletons originally returned to the U.S. after the war by the Chinese government which were subsequently buried as Unknowns and later exhumed by the CIL for identification. These particular skeletons are also believed to derive from battlefield contexts. Those turned over to the U.S. by North Korean author- ities between 1990 and 1994, many of which were alleged to come from Prisoner-of-War holding locations, will not be considered, nor will those recovered from sites in South Korea. Similarly, the historic epidemiological data on locations of wounds comes from those who were Killed in Action (KIA) as well as those who were Wounded in Action (WIA) and subse- quently Died of Wounds (DOW). Whenever possible, the KIA numbers, which should be most directly comparable to the battlefield skeletal data, will be considered, although some remains from JROs have subsequently been identified as individuals known to have been treated for their wounds at an aid station.

In current death investigations, forensic anthropologists are often called upon to address the circumstances of death, although not generally the cause or means, and as a result, the discipline has developed numerous techniques for reconstructing perimortem traumata. These techniques are generally applied to each skeleton as an individual case, with limited epidemiological applications (c.f., Baraybar 2007). For homicide victims, far more compre- hensive and accurate epidemiological data can be provided by pathologists than by anthropologists. In historic and prehistoric contexts, bioarchaeolo- gists may also address the circumstances of death for isolated individuals, but their general concern is paleoepidemiological, particularly for populations that lack significant demographic documentation. The sample considered here provides an opportunity to test whether a population-level study of trauma from an archaeologically derived skeletal sample is actually repre- sentative of what is historically documented about that population.

Paleopathology, MIA, Combat

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