



Physical Anthropology Section – 2004

H47 Deaths of Undocumented Immigrants in Southern Arizona

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The attendees for this presentation will better understand the perils that face undocumented immigrants and the spectrum of injury and disease that cause death. They will also have a better understanding of related issues that face local death investigation systems.

This presentation will give forensic scientists a better understanding of how death investigation systems are involved with a unique population of individuals. Ultimately, the mortality these people experience may be reduced.

This presentation will detail the pathologic findings of undocumented aliens who die in Southern Arizona as they attempt to reach destinations throughout the United States, primarily for better employment opportunities.

There has been a dramatic increase in the number of deaths of nonUnited States citizens who illegally enter the Southwest deserts of Arizona and California from Mexico. The largest percentage of these deaths is due to exposure to the hot environment of the summer and late spring. Other causes of death include trauma, natural disease and exposure to the cold. In a number of cases, the cause of death remains undetermined due to advanced decomposition and the absence of historical information. These individuals often remain unidentified.

Deaths which occurred over a two-year period, 2002 and 2003, are presented. The bodies were brought to the Pima County Forensic Science Center (Office of the Medical Examiner) for examination. Most of the individuals were discovered dead within Pima County and many of these individuals were on the Tohono O'odham Indian Reservation to the west of Tucson. Occasionally people were found alive but died after being transported to local hospitals. A minority of the cases were referred to the office from adjacent Southern Arizona counties. The study group consisted of a broad age range with men outnumbering women. Occasionally children were involved. Complete autopsies were performed on this population unless medical diagnoses have been established through hospitalization.

The increase in heat-related deaths is mainly responsible for the overall rise in immigrant deaths. In the desert southwest, temperatures are often over a hundred degrees Fahrenheit from June to September. It is speculated that greater numbers of immigrants are passing through the more dangerous, hot, barren, desert because the United States government is more closely monitoring the safer, populated regions along the border. Pathologic findings are often minimal in those dying from exposure to the hot environment. Most of the individuals show features of decomposition, which occurs quickly at such high temperatures. Even if the body is recovered soon after death prior to the development of putrefaction, rarely does one see previously described, heat-related pathologic processes such as cerebral edema and petechiae of the skin and internal organs.

Chemical evidence of dehydration was a common finding as manifested by elevated sodium and chloride levels often with elevated blood urea nitrogen and creatinine. However, dehydration was not always a factor for the cause of death. Toxicology testing was routinely performed although rarely positive for both legitimate and illicit drugs. Ethanol was often discovered and usually attributed to postmortem bacterial production.

The cause of death for heat-related death was certified as hyperthermia or probable hyperthermia even though body core temperature information was usually lacking. Simply certifying the cause of death as heat-related was not considered adequate by the local vital records department. When death was delayed and medical attention was provided to a small number of these individuals, elevated body temperatures were discovered.

The rather large number of these deaths has strained the resources of multiple agencies along the Arizona border including medical examiner's offices. Complete autopsies are generally performed on these individuals in order to best understand the cause of death. This information may be useful to help reduce this trend. In addition, should there be efforts to prosecute any individuals involved with organized efforts to smuggle immigrants into the United States, the most accurate cause of death will be available.

Heat-Related Death, Immigrants