A105 Bones and Teeth as Osteological Signatures of the Identity of Human Remains Excavated From a 160-Year-Old Abandoned Well: A Forensic Anthropological Case Report From India

Jagmahender Singh Sehrawat, PhD, Panjab University, Dept of Anthropology, Sector 14, Chandigarh 160014, INDIA; and Raj Kamal, PhD, Panjab University, Dept of Anthropology, Sector 14, Chandigarh 160014, INDIA*

After attending this presentation, attendees will better understand the outcomes of unscientific excavations of human remains from a confined location such as an abandoned well, preliminary identifications of exhumed remains from a forensic anthropological context, and future challenges to be faced by experts in their positive identifications.

This presentation will impact the forensic science community by encouraging forensic anthropologists to be extra cautious when excavating human remains from pre-existing structures such as wells, natural ravines, pits, and sewage channels and to make efforts to preserve the challenged forensic sites with the utmost care.

Mankind has witnessed several crimes against humanity in which disposal of human cadavers becomes problematic for the perpetrators to avoid international human rights attentions. The pre-existing structures, such as abandoned wells, potholes, natural ravines, roadside trenches, sewage systems etc., have remained preferred sites for the clandestine burial of such human remains. Post-conflict recovery of human remains has been reported from a number of countries, including Spain, Guatemala, Croatia, and Iraq; however, no such recovery was been reported from Indian soil from such sites, although in one incident, there was a written record of the presence of human remains from 282 individuals buried in a well under a religious structure at Ajnala, India.[1] This ignited the ethical conscience of various local people to excavate any such remains to corroborate or negate this reported case of a crime against humanity. As the entire excavation process was executed by amateur excavators, the bones of multiple individuals were recovered badly damaged and commingled. This study's primary goal is to identify whether the recovered human remains belong to victims of a reported mass-killing incident or to dead bodies disposed of prior to or after the reported incident in an attempt to solve the mystery of alleged crimes against humanity or human rights violations. The other objectives include: (1) determining whether the remains were modern or archaeological in nature; (2) if archaeological, determining whether the bodies date back to the mentioned period, or are older or younger; (3) discovering the minimum number of individuals present in the well; (4) establishing whether the remains were from North India (the local area of the site) or from Bengal, Bihar, and Uttar Pradesh, where the victims reportedly originated; and, (5) identifying the sex, age, ethnicity, and probable stature of the victims.

The shape, size, morphology, and proportions of different skeletal elements revealed these remains belong to adult male individuals. The articular ends of the fragmented long bones had no signs of osteoarthritis, implying that the majority of victims were less than 60 years of age. The overlapping, disorganized, and diverse positioning of individual skeletons and their stratigraphic sequences indicated that bodies were thrown into the well from the top at the same time. The retrieval of well-preserved teeth, hand and foot bones, vertebrae, a few intact skulls, femur heads, etc., from the commingled remains demonstrate that the present human archaeological site could have been processed more scientifically had it been excavated by trained anthropologists and archaeologists with expert knowledge in human osteology and odontology.

All intact skulls have traumatic injuries in the same region (i.e., the forehead region of the frontal bone), implying that some blunt weapon was used to inflict the same type of injury to the frontal head of the victims.

Associated ballistic evidence in the form of cone-shaped stone bullets (a few still intact) was also found with the remains. The majority of seriously damaged skeletal remains were found unsuitable for forensic examinations and hence were not analyzed. Only teeth were found in fairly good conditions and are expected to facilitate forensic anthropological identification regarding the provenance, geographic origin, disease and health status, dietary habits, minimum number of individuals inside the well, etc. from their anthropological, molecular, and elemental analyses. Numerous personal artifacts, including copper and iron wrist bracelets, gold necklace pieces, coins and medals (with the Queen's photograph and year), and beaded arm bands, were also recovered with the human remains inside the well. The systematic and expert-mediated recovery of human remains using advanced archaeological techniques and instruments may have proved fruitful, not only in their precise and safe excavation, but also in the identification of these human remains in the laboratory. This presentation will highlight the consequences of both the unscientific excavation of human remains and preliminary forensic anthropological identifications.

Reference(s):

1. Cooper F. The Crisis in the Punjab, From the 10th of May Until the Fall of Delhi. London: Smith, Elder and Co., 1958:151-170.

Forensic Archaeology, Human Remains in a Well, India