



REVIEW ARTICLE

Forensic Science

THE ROLE OF A FORENSIC ANTHROPOLOGIST IN INVESTIGATION OF DEATH

KEY WORDS: Forensic Anthropologist, Forensic Odontologists, Death Investigation.

Dr. Supriya Sharma*	Dept of Oral Pathology and Microbiology, Faculty of Dental Sciences, King George's Medical University, UP, Lucknow *Corresponding Author
Dr. Shaleen Chandra	Dept of Oral Pathology and Microbiology, Faculty of Dental Sciences, King George's Medical University, UP, Lucknow
Dr. Shalini Gupta	Dept of Oral Pathology and Microbiology, Faculty of Dental Sciences, King George's Medical University, UP, Lucknow
Dr. Surya Kant	Dept of Respiratory Medicine, King George's Medical University (KGMU), UP, Lucknow

ABSTRACT	The positive examination of human residues is a predominant task conducted by forensic scientists, i.e., pathologists, crime scene investigators, biologists, forensic odontologists, fingerprint experts, and anthropologists in mass disaster conditions. The examination procedure of the victims is generally achieved by scientific techniques. The differentiation procedure of a great number of bodies with many missing persons shouts for cleaving the population into separate subgroups to ease the task. Enforce forensic anthropology methods enables, among different things, the rejuvenation of the life history of the individuals perturbed, i.e., age, race, sex, and stature assistance in the cross-sectional analysis. The significance of the character of the forensic anthropologist in all phase of examination of mass disasters from the recuperation process of residues, inspecting them, and interpreting marks of instinctive trauma and disease as well as affirmative identification, is discussed.
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INTRODUCTION

The character a Forensic Anthropologist plays in a disaster victim investigation is pivotal to the enclosure of forensic dentistry as a whole. Forensic Anthropologists comprehend the construction and discrepancy of diverse forms of skeletal properties and petition their knowledge to their work in sequence to acquire reasonable negotiations. The principal cornerstone of a Forensic Anthropologist is to procedure crime scenes, inspect and operation remains, evolve a biological outline, compose suitable documentation, and evidence in the pastoral and Confederate courts. Their knowledge of the human body contributes to the consequence of a death inspection by providing law implementation organization with expert results and answers, which eventually helps in the outcome of any particular case. 1

EVENT PROCESSING

Forensic Anthropologists afford to event processing and the position of buried remains by supposing law enforcement organizations their assistant advice during an examination. When a Forensic Anthropologist is termed to the scene, there are various characters the specialist must perpetuate. Initially, the anthropologist should department "on-site examination of dispersed remains as they are established to decide whether they are human".

This perception permits the anthropologist to then proceed with revisions of the search strategy in response to appearing anatomical disperse design, as well as appraise the search team when residues are intact and when the forage can be discontinued".2 Some crime scene is intricate in nature, and the probability of contamination is constantly an issue. This is principally due to the "damage of the residue by the offender animals, or time which manufactures identification of the subject difficult, if not impossible".3

Grids are situated around the area of crime to preserve the scene. Subsequently this, an anthropologist will format an umbrage area where "surrounding field and substance from the grave and surrounding area will be consistently sifted from a screen to divulge human residues, fibers, artifacts, fibers, and related pests. Eventually, the anthropologists will layout a staging area for revealing; this involves the concealing of different earth substances, plants, metals, and accumulation.2 While, scenes are not practiced solely by a Forensic Anthropologist, this advisor subscribes to the conservation and discovery of human remain.

DETRITUS EXAMINATION

Forensic Anthropologists should be capable to distinguish between human and non-human residues, and also have the potential to implement a taphonomic assessment and an investigation of soft tissue in order to inspection and procedure remains significantly. Although an anthropologist is compulsory to investigate residues the scientist need to be expert to "discriminate bone from non-bone substance/ then differentiate bone of human from nonhuman bone" premised on the evidence bestowed.4 Once the advisor has resolute if the bones are actually extracts of a human body, they should then execute a taphonomic judgment.

In Forensic Anthropology, "taphophile deliberation has come to mean elucidation of all events influencing the residues among death and discovery," which is resolute by utilizing methods such as "Evaluation of post-mortem period, environmental regeneration, rejuvenation of period of post-mortem events, and differentiating evidence of repellent play from variations generated by diverse taphonomic factors".5 They also investigate "alterations in soft tissue involving patterns and rates of putrefaction, diffusion of body parts, defective articulation, and mitigation of combined soft tissue and bone" in relation to settle a proper analysis of the residues available.6 The dissimilitude among human and nonhuman remains, subsequently the taphonomic estimation and investigation of soft tissue percolate by the Forensic Anthropologist aids this expert to resolve whether or not the materials acquired are of importance in an examination..

EVOLVING A BIOLOGICAL PROFILE

Forensic Anthropologists attempt unrevealed deceased specific an existence by establishing a living profile to render their physical features. There are different subsidizing factors that aid these experienced establishes a singular's age, gender, and stature. When a Forensic Anthropologist should resolve an entity's age, they should first administer their philosophy of dental and skeletal advancement to their completion. Essentially, the age of an individual determines by ossification centers in bones.

This advancement is an arrangement, depending on age, gender, fundamental of bone, hormonal and nutritional dignity, and individual dissimilarity.2 Subsequently, ascertaining age also depend on the dental advancement of the individual. They administer odontological identification of the subject depend on the dental evidence and spur radiographs, which benefit them in implementing a range of age of an individual.7

When a forensic specialist must resolve the biotic gender of an individual, the bones of the hip exhibit the most sexually pleomorphism details of the skeleton, making it a critical in deciding the gender. Initially due to "the distinct gender-specific variations in shape and size" they can regulate the characteristic between pelvises of male and female. 8 It has been suggested that the investigation of pelvis bone by these specialists grants an excellent opportunity to determine the biological gender of an individual. When they implement the biological stature of an individual, there are numerous formulas that they can apply. Even with, the greater well-founded results depend on lengths of a long bone and especially the lower limbs bones," or most generally referred to as the use of allometry.9

CAUSE OF DEATH

The document that a Forensic Anthropologist presents to a coroner or medical investigator is critical in understanding and deciding the reason of death in an investigation. Forensic Anthropologists "generally classify traumatic events as resulting from sharp forces, gunshot or blunt forces". Blunt force damage "develops impact marks or fractures, and can piece bone", which can eventually resolve structure, type of trauma or class of weapon class. When an anthropologist inspects a gunshot wound, they will "regenerate a skull smashed by gunshot in relation to assessing the injuries". 2

These progression aids the forensic experts to dictate the entry and exit wounds, additionally how much shots were fired. Sharp and blunt force damage, as well as gunshot wounds "develops unique skeletal characters that are generally readily distinguishable in unmodified remains". These injuries eventually aid the forensic anthropologist in the medical or coroner examiner with information essential to determine the cause of death, depend on injuries to the bones.

DOCUMENTATION AND BYSTANDER TESTIMONY

They may be considered an expert in his or her field of study. These Anthropologists must include a "full range of anthropological measurements and determinations," also taphonomic assessments, biological profiles, individualization of characteristics, and evidence of Perimortem trauma.2 Documentation and eyewitness testimony is required for most forensic scientists, as it helps the overall outcome of a death investigation by providing the legal system with a scientific explanation of evidence.

CONCLUSION

Forensic Anthropologists play a crucial role in establishing the cause of death in an investigation. To process the crime scene, investigate and the process remains, develop a biological profile, provide appropriate documentation of their findings, and testify in the court of law are the main focus of a Forensic Anthropologist.

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CONFLICTS OF INTEREST

There are no conflicts of interest

REFERENCES

1. Stanojevich V. The Role of a Forensic Anthropologist in a Death Investigation J Forensic Res 2012; 3:154.
2. James SH, Nordby JJ. Forensic Anthropology. Forensic Science: An Introduction to Scientific and Investigative Techniques. (3rd Ed), CRC Press, Boca Raton, Fla. 101-135, 2009.
3. Pickering R, Bachman D. The Use of Forensic Anthropology (2nd Edn), CRC Press, Boca Raton, Fla, 2009.
4. Dupras TL. Forensic Recovery of Human Remains Archaeological Approaches (2nd Ed), CRC Press, Boca Raton, Fla, 2012.
5. Ubelaker DH. Taphonomic Applications in Forensic Anthropology Taphonomic Applications in Forensic Anthropology, 1996.
6. Haglund WD, Sorg MH. Forensic Taphonomy: The Postmortem Fate of Human Remains. CRC Press, Boca Raton, Fla, 1997.
7. Stimson PG. Forensic Dentistry. CRC Press, Boca Raton, Fla, 1997.
8. Schmitt A, Cunha E, Pinheiro J. Forensic anthropology, and medicine complementary sciences from recovery to cause of death. Humana Press, Totowa, NJ, 2006.
9. Pelin IC, Duyar I. Estimating Stature from Tibia Length: A Comparison of Methods. J Forensic Sci 2003;48:708-712.