

An Overview On The Role Of Dentists During Mass Disasters

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ABSTRACT:

Mass disasters leads to damage, ecological disruption, and loss of human life on a massive scale. The purposes behind these reaches from regular makes, for example, volcanic ejections and tremors optional human causes like wars. Such monstrous interruption of life requests help from individuals having a place with different divisions of medical services, giving pre distinguished, organized, and precise guide to the casualties of the fiasco. This audit article features the function of a dental specialist in such enormous fiascos. The dental specialist gives emergency treatment to the casualties as well as helps in the distinguishing proof of human remains.

Key Words: *Forensic odontology, Dentist, Human remains, Disasters.*

INTRODUCTION:

Disasters are as old as mankind's set of experiences, yet the sensational increment just as the harm brought about by them in the ongoing past have become an explanation of public and global concern; practically every one of them bringing about high frequency of horribleness and mortality. Mass fiascos are profoundly startling occasions that cause disturbing loss of lives. A "fiasco" is regularly characterized as "any occasions that prompts harm, environmental interruption, harm, decay of wellbeing and wellbeing administrations for huge scope which is sufficient to warrant an extraordinary reaction from outside the influenced community."^[1] Significant crises and catastrophes have happened since the commencement and consequently the rate of fiascos has brought up in the ongoing past attributable to the expansion in the total populace. Following mass debacle, recognizable proof of an individual casualty by dental methods, is one of the most dependable techniques. In extreme consume circumstances or potentially following serious breaking down, visual acknowledgment of facial highlights and fingerprints is frequently unimaginable because of broad delicate tissue demolition; this circumstance guarantees the utilization of hard (calcified) tissue, for example, human dentition and jaw bones for human distinguishing proof as they continue serious type of affronts with insignificant loss of identification subtleties. Individuals who have been unhealthy for quite a while before death and those suffocated coincidentally in water likewise present undesirable conditions with trouble in identification of the casualty ^[2]. As a result of the absence of an exhaustive unique mark information base, dental distinguishing proof keeps on assuming an indispensable part in mass disaster ^[3].

ROLE OF A DENTIST IN IDENTIFICATION OF HUMAN REMAINS:

The significant function of dental specialists in the identification process is reflected from the occasion where high level of casualties were distinguished by means of dental assessment (61%) in the Tsunami of 26th of December in 2004, north of Sumatra Island.^[4] Scientific dental specialists for the most part have a main part in the measurable group when dental structures are the main wellspring of data for the identification of human remains.

The obstruction of teeth and their supporting tissues, even to fire and decay, makes them incredibly valuable for recognizable proof purposes.^[5,6] For the identification of human remains, whatever recognizes one individual from another, for example, a tattoo, or a variety from ordinariness, turns out to be essential to the measurable group, extraordinarily helping the identifying process.^[7] These varieties, dissected by dental analysts, can possibly prompt a positive identification.^[8] The most regular examination performed, is the near assessment used to set up with conviction that the remaining parts of the expired and the individual spoke to by bet mortem dental records are of a similar person. In a large portion of the creating nations, far reaching unique mark information base and complete bet mortem dental records are not looked after appropriately, hence making relative dental identification at times basic. The subsequent examination is for cases without past risk mortem records and no signs of positive character exist. Under these conditions, posthumous dental profiles finished by the measurable dental specialists recommending qualities of the individual outcome in narrowing the pursuit of the risk mortem material.^[9]

The American Board of Forensic Odontologists^[10] recommends only four conclusions when reporting dental identification:

- (1) Positive Identification: the risk mortem and posthumous records coordinate in subtleties with no unexplainable errors
- (2) Potential Identification: bet mortem and after death information have reliable highlights however because of low quality, character can't be decidedly settled
- (3) Inadequate evidence: accessible data is deficient to frame reason for the last end
- (4) Exclusion: the risk mortem and after death information are unmistakably.

POSTMORTEM DENTAL PROFILING:

Postmortem dental profiling is the cycle by which legal dental specialists limit the conceivable populace to which an expired has a place, without bet mortem dental records. Posthumous dental profile will give data on age of the deceased,^[11] foundation subtleties of ancestors,^[12] sex, and financial status.^[13] Time of youngsters (counting fetuses and children) can be dictated by examination of tooth advancement and resulting correlation with formative diagram; precision is ± 1.5 years.^[14] Periodontal malady movement, over the top wear and various rebuilding efforts, extractions, bone pathology and complex therapeutic work may bring up older individual; these exceptionally factor markers exactness rate is ± 10 to 12 years. Using aspartic acid racemization some forensic odontologists have claimed of accuracy rate ± 4 . Scanning Electron Microscope/Energy Dispersive X ray Spectroscopy (SEM EDXS), is also used to examine restorative materials including resin in relation to age determination in cases where dental status of victims cannot be determined due to damaged dentition

OTHER METHODS:

The current day DNA fingerprinting depends on polymerase chain response (PCR) that goes through hereditary intensification of Short Pair Rehashes (STR) of particular, exceptionally polymorphic areas of DNA. This aides for contrasting DNA from jaws, teeth and remaining pieces of unidentified cadaver with a known bet mortem test from blood, hair, fabrics, cervical smear, or biopsy specimen.^[15] Finally the idea of the mishap, the level of dental injury, the frequency of dental treatment and the accessibility of dental records chooses the achievement pace of dental recognizable proof.

CONCLUSION:

The part of a dental specialist during mass fiasco is very much characterized in other created nations when contrasted with India. The job must be distinguished, portrayed, and relegated alongside legitimate preparing to

be given to the dental specialist, with compelling arranging, instruction, and preparing, dental specialists can assume a noteworthy part in reacting to mass calamity or other unexpected occasions.

REFERENCES:

1. Bhat PK, Badiyani BK. Are dentists ready for the invincible disasters? *Journal of Health Sciences and Research* 2011;2:33-6.
2. Valenzuela A, Marques T, Exposito N, Bohoyo JM. The application of dental methods of identification to human burn victims in a mass disaster. *Int J Legal Med* 2000;113:236-9
3. Sharma G, Kumar R. Role of forensic odontologist in disaster victim identification. *Journal Indo-Pacific Academy of Forensic Odontology* 2011;2:31-2.
4. Rai B, Anand SC. Role of forensic odontology in tsunami disasters. *Internet J Forensic Sci* 2007;2:1540-2622.
5. Oliveira RN, Daruge E, Galvao LC, Tumang AJ. Collaboration of forensic odontology for identification postmortem. *Rev Bras Odontol* 1998;55:117-22.
6. Brkic H, Keros J, Kaic Z, Cadez J. Hereditary and environmental dental findings in identification of human remains. *CollAtropol* 2000;24:79-83.
7. Kanchan T, Shetty M, Nagesh KR, Menezes RG. Lumbosacral transitional vertebra: Clinical and forensic implications. *Singapore Med J* 2009;50:85-7.
8. Warnick A. Mass disaster management: The organization of a mass disaster dental identification team. *Alpha Omegan* 2002;95:25-37.
9. Stavrianos C, Stavrianou I, Dietrich E, Kafas P. Methods for human identification in forensic dentistry: A review. *The Internet J Forensic Sci* 2009;4:413-21.
10. Body identification guidelines. American Board of Forensic Odontology (ABFO). *J Am Dent Assoc* 1994;125:1244-6.
11. Mincer HH, Harris EF, Berryman HE. The A.B.F.O. study of third molar development and its use as an estimator of chronological age. *J Forensic Sci* 1993;38:379-90.
12. Guo L, Sun DL, Ren L, Shen J, Pan KF, Shen J, et al. A comparative morphologic study of Carabelli cusp between Chinese and Japanese students. *Shanghai Kou Qiang Yi Xue* 1995;4:66-7.
13. Slavkin HC. Sex, enamel and forensic dentistry: A search for identity. *J Am Dent Assoc* 1997;128:1021-5.
14. Adachi H. Studies on sex determination using human dental pulp. II. Sex determination of teeth left in a room. *Nihon Hoigaku Zasshi* 1989;43:27-39.
15. Kolude B, Adeyemi BF, Taiwo JO. The role of forensic dentist following mass disaster. *Ann Ib Postgrad Med* 2010;8:111-7.