

Knowledge, Attitude and Practice of Forensic Odontology among dentists of Kumaon region of Uttarakhand.

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Abstract

The human dentition is similar to the fingerprints we possess in that it is unique to each individual. Dentistry has much to offer law enforcement in the detection and solution of crime or in civil proceedings. Forensic dental fieldwork requires an interdisciplinary knowledge of dental science. to reinforce awareness among dentists about their role in person identification and the importance of maintaining dental records of all their patients dental professionals have a major role to play in keeping accurate dental records and providing all necessary information so that legal authorities may recognize, malpractice, negligence, fraud or abuse, and identify unknown humans.

Keywords: Forensic odontology, Survey, KAP study

Introduction

Forensic dental identifications play a vital role in the identification of individuals when identification by visual or any other methods like finger printing fail. Dental

identification of a person is based on unique individual characteristics of the dentition and dental restorations, relative resistance of the mineralized dental tissues and dental restorations to changes resulting from decomposition and harsh environmental extremes such as conditions of temperature and violent physical forces¹.

Dental identification assumes a primary role in the identification of remains when postmortem changes, traumatic tissue injury or lack of a fingerprint record invalidate the use of visual or fingerprint methods. The identification of dental remains is of primary importance when the deceased person is skeletonized, decomposed, burned or dismembered. The principal advantage of dental evidence is that, like other hard tissues, it is often preserved after death. Even the status of a person’s teeth changes throughout life and the combination of decayed, missing and filled teeth is measurable and comparable at any fixed point in time^{2,3}.

The fundamental principles of dental identification are those of comparison and of exclusion. For example, dental identification is used when antemortem records for the putative deceased persons are available and circumstantial evidence suggests the identity of the decedent, and when antemortem records of other suspicious, unidentified persons are available and must be ruled out. Identification requires a list of the possible persons involved so that appropriate antemortem records can be located. The availability and accuracy of these records determine the success of identification. Unfortunately, dentists often maintain poor records, resulting in confusion that makes dental identification impossible³.

AIM

1. To find out the knowledge regarding forensic odontology.
2. To find out the attitude and practice by dentist towards forensic odontology.

Method

Survey consisted of a written questionnaire sent to dentists containing nine questions regarding knowledge; attitude and practice towards forensic odontology were designed and given to 100 dentists practicing in the limits of Kumaon region of uttarakhand.

Exclusion criteria

1. Dentists who are practicing for less than 10 years.
2. Dentists who are visiting in dental clinic from other places than Uttarakhand.
3. Dentists who achieved specialty of oral pathology.

Inclusion criteria

Dentist in the limits of Kumaon region of Uttarakhand.

Result:

Nine (18%) dentists of a total of fifty respondents indicated that they have marked cheiloscopy, and twenty five (Graph :1)of these marked odontoscopy, eleven of these marked endoscopy and six marked laparoscopy.

This indicates that 78% of dentists do not know about cheiloscopy.

Synder LM explained that the wrinkles and grooves on labial mucosa, called as sulci-labiorum forms a characteristic pattern and the study of which is referred to as cheiloscopy. These are unique to an individual just like the fingerprints⁴.

Twenty two dentists of a total of fifty respondents indicated that they marked 3-4years for maintain the x-ray records photographs and clinical detail of patient examined in there clinic , eleven of these marked for 1-2 years and ten marked for 7-8 years(Graph:2). Total of seventeen dentists do not maintain the records of their patients. This indicates that 34% of dentists do not know importance of mataining records of their patients and rules of ABFO.

Tsang A explained dental record is a legal document owned by the dentist, and contains subjective and objective information about the patient. Results of the physical examination of the dentition and supporting oral and surrounding structures must be recorded. In addition, the results of clinical laboratory tests, study casts, photographs and radiographs become components of the record, and should be kept for 7-10 years⁵.

Fourty one (82%) dentists have not attended any CDE (Continued dental education)or workshop regarding forensic odontology, while thirty five (70%) dentists are interested in receiving training or attending the workshops regarding forensic odontology, this shows that they have developed good attitude towards forensic odontology.

Twenty five (50%) dentists of a total of fifty respondents indicated that they marked PCR(polymerized chain reaction) is the recent technique for forensic odontology. Ten dentists marked for radiograph and four marked for photograph as recent technique. Eleven (Graph:3)dentists marked DNA(deoxyribonucleic acid) imprint is latest

technique, which is the recent technique to solve the forensic cases.

Sweet.D explained the resistant nature of dental tissues and dental restorations to changes brought about by environmental extremes such as temperature and decomposition make them an ideal source of DNA, which will be of great help in the identification of a person⁶.

Fifteen (30%) dentists never record the clinical findings and directly start the dental treatment, twenty (40%) Graph : 4 dentists examine chief complaint, soft tissue and hard tissue details so they can help forensic odontology related cases if required.

Eighteen(36%) dentists have knowledge of using denture identification markings,maintaining complete hard and soft tissue findings and clinical records,so that they can play a role in helping forensic odotnology related cases. 64% dentists donot know that denture identification markings, maintaining complete hard and soft tissue findings and clinical records can help in forensic cases.

Alexander CJ in 1998 did a study on assesment of attitude ,practice of denture making in South Australia ,this results indicated that no practioner routinely labelled dentures⁷.

Fourty (80%) dentist don't know that famous personality Hitler and his mistress bodies were identified by his dentist by using his dental records.

Bagi BS mentioned in 1977 that the bodies of Hitler and his mistress Eva Brauma were identified by his dentist, (Kathe Hensrman Fritz Echtmann) using dental records⁸.

Conclusion

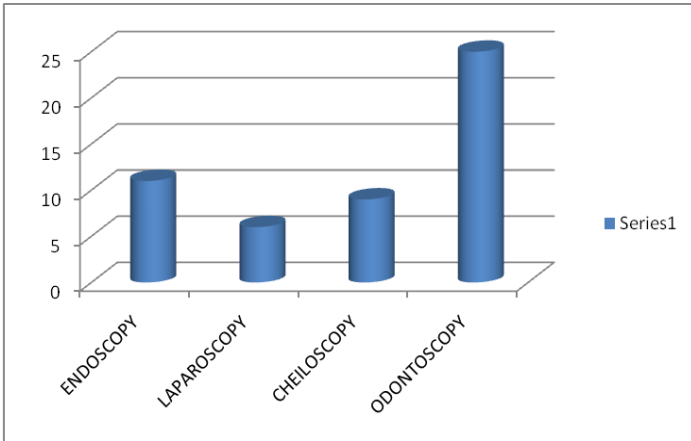
Forensic dental identification depends largely on the availability of ante mortem records. So, it is the social responsibility of each dentist to maintain dental records of their patients for the noble social cause of identification in the event of any disaster. Regarding achieving the knowledge of forensic odontology every dentist must

attend workshop, conferences, CDE programme so that they will be updated regarding forensic odontology.

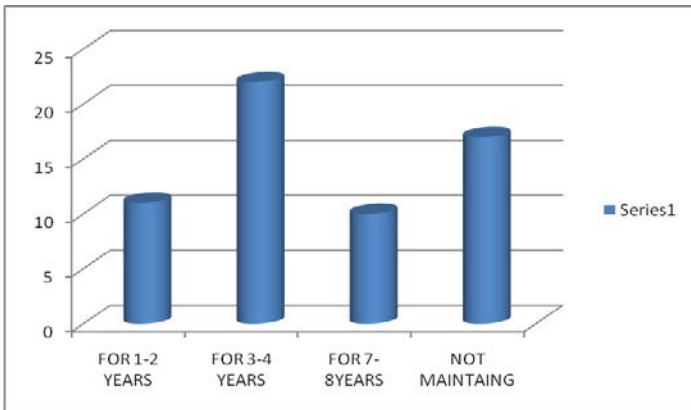
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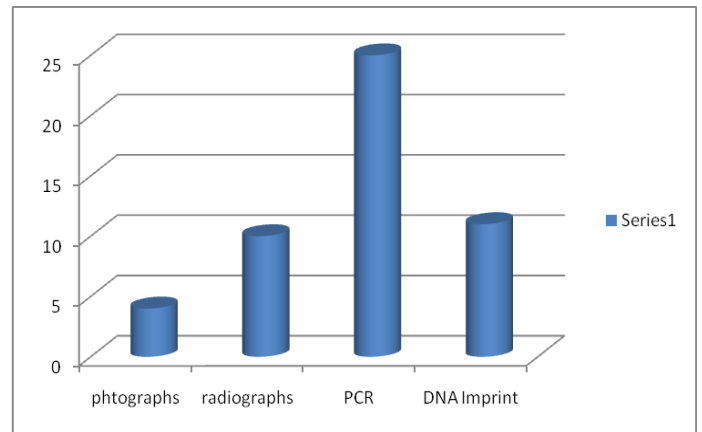
Legend Figure



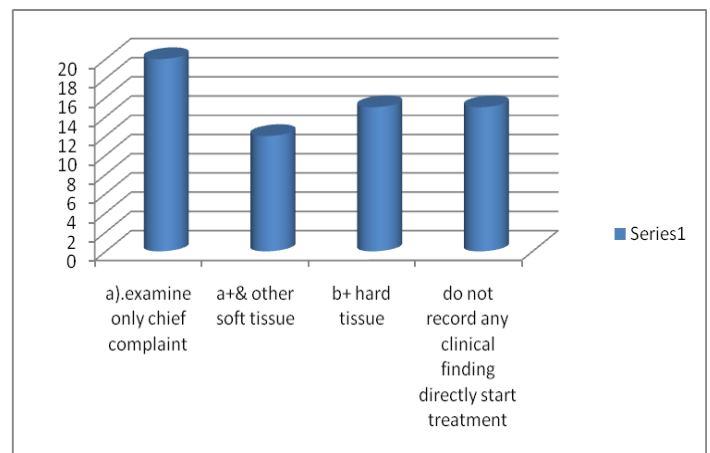
Graph 1: Showing dentists response towards knowledge of forensic odontology.



Graph 2: Showing dentist response towards clinical record maintainace in there clinics.



Graph 3: Showing dentists response towards use of recent techniques in solving forensic odontology cases.



Graph 4: Shows dentists response towards recording of clinical details of patients in there clinics.