



“AWARENESS AMONGST DENTISTS ABOUT PRESERVATION OF DENTAL RECORDS AS A FORENSIC TOOL” – A PILOT STUDY

Dental Science

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ABSTRACT

Personal identification is an integral part of forensic investigation. DNA profiling, dental records and finger prints are more commonly used. However, these evidences may not always be obtained or used circumstantially. In such situations, the role of the dentist in maintaining the dental records is very crucial and important. The aim of the study is to analyze the knowledge, attitude and practice of forensic odontology among dental practitioners. A cross-sectional study was conducted in a sample of 100 dentists among which 50 were clinical practitioners and other 50 were academicians and data was collected by means of a questionnaire.

KEYWORDS

forensic odontology, dental records.

INTRODUCTION:

Forensic dentistry is a challenging branch of forensic science that involves the application of dental sciences in identifying a suspect at crime scenario or deceased individuals through the comparison of ante- and post-mortem records. Recently, forensic odontology has evolved as a new ray of hope in assisting forensic medicine, but is still in a budding stage in India.^{1,2} Forensic dental record comparison has been used for human identification in cases where destruction of bodily tissues has made other means of identification impractical.^{1,2} Dental remains are usually the last to get destroyed among body parts and therefore may be useful for identifying suspect in various medico legal cases. A dental record is a detailed document of history of present illness, physical examination, diagnosis, treatment and management of the patient.³ Dental professionals are compelled by law to produce and maintain adequate patient records.³ Though maintaining dental records is mandatory in western countries, in India the laws are vague.⁴ So, the purpose of this study is to assess awareness regarding the practical importance, quality, period of maintenance of dental records among dentists in particular and also in few institutions and also to evaluate if the records have been of any sort of help in medico-legal cases.

MATERIALS AND METHODS:

A survey was conducted among 100 dentists who were associated with academic institutions and also among 50 clinical practitioners. All the practitioners and dentists associated with respective institutions included in the study were individually explained regarding the nature and purpose of the survey and consent alongside their appointment was obtained from individuals as well as from the principals of the respective institutions in person.

The sample group was assessed individually regarding the mode of dental record maintenance using a structured questionnaire consisting of 30 items in a printed format, prepared as per ADA guidelines.

RESULTS:

1. Awareness regarding dental record maintenance:

Questions	Academic (n=100)		Clinical practitioners(n=50)	
	Yes (%)	No (%)	Yes (%)	No (%)
Record maintenance		100	00	90 10
Mode of record maintenance	Paper file			36
	Computerized			04
	Both	100	00	50
Legally mandatory?	100	00	100	00

2. Assessing the quality of dental record maintenance:

Questions	Academic (n=100)		Clinical practitioners(n=50)		Not answered
	Yes (%)	No (%)	Yes (%)	No (%)	
Name, age, gender & contact number	100	00	100	00	
Complete postal address	89	11	86	14	
Occupation & complete medical history	94	06	80	20	
Reason for visit, complete mouth examination, dental anomalies & proposed treatment plan	100	00	100	00	
Previous dentists name	49	51	36	64	
Informed consent	100	00	64	36	
Radiographs	99	01	84	08	08
Dentition status	97	03	88	06	06
Denture details	84	16	72	14	14
Treatment done	97	03	96	02	02
Serial no. of implant	76	24	52	24	24
Broken appointment details	74	26	40	60	
Record of prescribed medication	85	15	58	42	
Records preserved at least for 5 years	96	04	58	42	

3. Period and importance of dental record maintenance:

Questions	Academic (n=100)			Clinical practitioners(n=50)		
	<5 years	>5 years	Not maintained	<5 years	>5 years	Not maintained
Period of maintenance of X-rays, pre & post operative photos, study models after treatment	77%	23%		50%	14%	36%
	10 years	20 years		10 years	20 years	

Retain child patients records until the child attains	13%	87%		62%	10%	28%
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4. Dental record as a forensic tool:

Questions	Academic		Clinical practitioners(n=50)	
	Yes %	No %	Yes %	No %
Orthodontic models retained permanently (n=15)	77	23	32	68
Dental records useful in medico legal cases	100	00	100	00
Teeth are last to be destroyed in disasters	100	00	100	00
Have your records been used for forensic investigation?	00	100	00	100

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DISCUSSION:

Forensic odontology is an important branch of dentistry that would assist in solving medicolegal cases & identifying the individuals in mass disaster circumstances. Adequate knowledge and awareness of forensic odontology among dentists would be required in this growing field of medicine. The significance of forensic odontology can be attributed to the ability of dental tissues to withstand environmental assaults and still retain some of its original structure. This makes dental tissues an excellent source for forensic investigations. [1] Developed countries across the world are far ahead of developing countries like India when it comes to practice of forensic odontology. In India quite often we do experience extreme climatic disasters like Tsunamis in 2004 and floods in Uttharakhand between the 2nd & 3rd quarter of this year, where death toll was in thousands, and also India ranks 10th in crime rate⁵ and abuse in the world, with lakhs of cases being reported every year, but it is still an unanswered question as to whether all the victims in disasters or suspects in crime scenario were correctly identified. This may be due to lack of expertise and also well documented patient records.

The dental records are not always maintained for a forensic purpose but mainly serve the purpose of future reference for dentists when needed as far as treatment is concerned.^{1,2} In the present study almost all the dentists' surveyed maintained dental records except for 10% of clinical practitioners and also everyone were aware that it is legally mandatory to maintain dental records. However, only 24% of dentists associated with institutions and 14% clinical practitioners were maintaining dental records over a period of ⁵⁻¹⁰ years, but according to law it is mandatory to maintain records for a minimum of 7 years and maximum of 10 years.⁶

Whether dental records are being used for forensic investigations is a valid question to consider.

In the present study, though most of the dentists who were part of the study maintained records, the majority of data was incomplete and records were not preserved for a longer duration as stated by law. Also in the study none of the dentists were consulted to be a part of any sort of forensic investigation irrespective of whether they maintained the records or not.

CONCLUSION:

This study not only revealed their lack of awareness but also highlighted the lack of communication between the judiciary and the dentists as they were never consulted to be a part of any investigation. It also reflects the awareness of dentists of this region with respect to use of dental records as a forensic tool but lack of maintenance of the data according to standard protocols. Furthermore, it also revealed that quality and period of maintenance of dental records was significantly higher in dentists associated with institutions rather than clinical practitioners. We would like to suggest that to improve the standards of record maintenance, strict laws should be enforced by the government making it mandatory to maintain dental records and also the maintained records should be periodically supervised by officials at different levels. Further awareness should be brought among dentists regarding record maintenance and its use as a forensic tool through CDE, IDA conferences.

REFERENCES: