

REVIEW ARTICLE

Dental Death Due to Malpractices: A ReviewAvanindra Kumar¹, Amit Kishor², Avanish Kumar³, Swati Priya⁴, Shubhra⁵**ABSTRACT**

Negligence and malpractice occur in the dental profession as well as in any other profession.

In 2006 National Practitioner Data Bank, states that one out of every seven medical malpractice cases is directly involved with dental profession. Dental malpractice occurs when a dentist fails to diagnose or treat the diseases or other serious problems; delays in diagnosis or treatment of oral disease or other oral conditions; and may intentional misconduct by the dental professional's part. Malpractice means personal injury or death to the patient it occurs when dentist's conduct does not meet with the standard care.

Keywords: Negligence and malpractice, dental professional, death

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INTRODUCTION

Malpractices come under the form of dental and medical malpractice. It covers a range of issues like negligence, damage or injuries to the patients; even misconduct can be fall under the category of malpractices like if any sedated patients abused or molested by practitioner.¹ Negligence word comes from the word *neglego* or *neglect* which means lack of proper care and attention; carelessness. Neglect can be described as fail to care for or to do, not pay attention to; disregard.²

Dental negligence and/or malpractice can include the following:¹

- Delayed or insufficient treatment of disease or the initial oral problem
- Delayed or insufficient diagnosis or non-treatment of a disease or the initial oral problem
- Jaw fracture or other injuries resulting from extractions and/or infection
- Improper usage of dental equipment, such as implants, drills and dental lasers which cause infection
- Permanent or temporary damage to lingual nerve injury, including tongue and inferior alveolar nerve damage, including jaw, chin and lips
- Numbness that can be temporary or become permanent
- Neglecting to inform or update patient on treatment procedure and related risks or healing aids
- Marred root canals, implants or dental bridges, infection resulting from the procedures
- Improper use of anesthesia causing complications or death
- Osteoradionecrosis following dental extractions in an irradiated jaw
- Faulty restorations leading to tooth loss
- Treatment exceeding scope of consent and "treatment" by unlicensed, phony "dentists"

"I swear by Physician, by Asclepius, by Health, by Heal-all, and by all the gods and goddesses, making them witness, that I will carry out, according to my ability and judgment. I will use treatment to help the sick according to my ability and judgment, but I will never use it to injure or wrong them." (Hippocrates oath).

The dental profession's knowledge and skill can be used for the benefit for the others. Which carries with its responsibility to individual patient and society The society and patient confers on dental professional which requires them to behave in an ethical manner and the ethical behavior³

The Supreme Court of India believes that the essential components of negligence are three: duty, breach and resulting damage.⁴

A case of occupational negligence is different from one of professional negligence. A simple lack of care, an error of judgment, or an accident, is not proof of negligence on part of the health professional. So long as a doctor follows a practice acceptable to the profession of that day in the region, she/he cannot be held liable for negligence merely because a better alternative course or method of treatment was also available.⁴

Dentistry has been changed during the last century.³ where

the decision was made by the dentist that what was the best for the patient.⁵ Now a days a relationship was made between the doctors and the patient which is based on co-operation rather than confrontation, where dentist must understand the patient as a unique human being. Today more patients are getting aware of their rights and they are free to make choices and decisions on their treatment. So dentist must have to know their duty and to perform with proper care.⁶

Mortality Rates in Dentistry due to malpractice

It is stated that roughly 1 death occurs in every 400,000 cases where anesthesia is used in dental offices. Numerous studies have been done over the years to determine outpatient anesthesia mortality rates in dentistry. Statistics range from 1 death in every 162,000 cases⁷ to 1 in every 1.733 million cases⁸, where anesthesia is used in dental offices, depending on which study is looked at. In some studies no deaths occur and for obvious reasons are not included as an upper bound. Compilation and analysis of data by various authors in the United Kingdom, Canada, and the United States seems to indicate that death occurs in dental offices where anesthesia is used somewhere in the range of 1 death in every 229,730 cases to 1 death in every 835,000 cases.⁷⁻¹⁰

Published mortality rates in dentistry associated with anesthesia

Author	Year published	Deaths/patients
Seldin and Recant ⁷	1995	15/2,42,9148
Driscoll ¹¹	1966	5/1,57,5000
Driscoll ¹²	1974	11/5,285570
Lytle and Stamper ¹³	1989	7/4,711,900
D'Eramo ¹⁴	1992	2/2,082805
Flick and et.al ¹⁵	1996	1/151,355
Nikansah and et.a ¹⁶	1997	4/2,830,000
D'Eramo ¹⁴	1999	0/1,588,365
Deegan ¹⁷	2001	22/14,206,923
Perrot and et.al ¹⁸	2003	0/34,578
D'Eramo and et.al ¹⁹	2003	2/1,706,100
Rodgers ²⁰	2005	0/2,889
Flick and et.al ²¹	2006	2/1,159,400
D'Ermo ¹⁶	2008	1/1,733,055
Rodgers's and Rodger's ²²	2011	0/3,320
AOOMS white paper ²³	2013	82/29,975,459

Study included by Lytle is a comparative mortality rate which included previous studies over a 20 year period from 1968 to 1987.¹³ Of course this does not include all people who were treated with anesthesia in a dental office over this time.²⁴ Nor does it include all people who died in a dental office during this time or all deaths related to dentistry. Coplans and Curson 1982 determined that a total of 120 deaths associated with dentistry occurred in the study period of 1970-1979 and

in 1993 in a 10 year follow up study determined a total of 71 deaths occurred associated with dentistry with both studies occurring exclusively in England and Wales. The 1993 study was unable to determine approximately how many total patients were given anesthesia over the 10 year period from 1979-1989 so that figure was not included above. However, they did determine in the 1982 study 56 deaths and in the 1993 study 29 deaths all occurred in general dental practices, community dental services, or from hospital outpatients. The other deaths not included out of the total reported were either hospital inpatients or unknown.²⁵

In USA the insurance company named OMSNIC examined on 29,975,459 cases in office anesthetics like conscious sedation, deep sedation and general anesthesia and they found out of every 365,534 person had brain damage.²³ In this study from 2000-2010 roughly 80 deaths was reported. Excluding the OMSNIC data; roughly 1 death occurs every 4000,000 cases where anesthesia is used in dental office. Studies conducted by Coplans and Curson showed that there is decrease in dental deaths after 1970. A another study conducted by Seldin, and Recant, Driscoll, Tomlin Coplans and Curson shows in every 737,000 cases roughly 1 death occurs where anesthesia is used in dental offices.

However, perhaps a better treatment would be to simply deweight the data prior to the 1980s (as in have that data factor in less to the end result) perhaps by multiplying the deaths that occurred in that period by a factor of 0.55. If this is done than roughly 1 death occurs in every 450,000 cases where anesthesia is used in dental offices.²³ If one does not do any deweighting using older data and takes 91,904,867 and divides it by 239, this means roughly 1 death occurs in every 385,000 cases where anesthesia is used in dental offices. For convenience this number has been rounded to 1 death in every 400,000 cases where anesthesia is used in dental offices.

The actual number of occurrence of death in these studies is debatable and some dentists massage the data by altering these numbers.^{16,21} Further note the actual numbers classified as a dental death in some of these studies is somewhat debatable and some practitioners massage and tweak the data by altering these numbers slightly.^{16,21}

Pediatric Dental Deaths

The U.K. department of health states that in England 178 deaths were found due to general anesthesia in the year of 1965 to 1999 which includes 95 deaths due to dental malpractices and 65 death at hospital negligence. In overall 55 of them were children either under 15 years old (1965-1981) or under 16 years old (1982-1999)²⁶ in January 1st 2002 general anesthesia is not in used in dental practices in the U.K. and only available in a hospital settings.²⁷

A study published in *Pediatrics* in 2000 found that a disproportionately large number of adverse sedation events in pediatrics (defined as under 20 years old in study) occur with dental treatment when compared to other medical spe-

cialties.²⁸ A higher proportion of children who experienced an adverse sedation event in dental practice or dental office suffered death or some neurological injuries.²⁹ A study conducted by Pediatrics in 2011 shows no any difference for major complications among different pediatric specialists and it concluded that if pediatric sedation is performed outside the operating room may yield serious adverse outcomes.³⁰

Dental Deaths under 18 years old

1. A 3 year old girl visited the dentist to have four root canals and ten cavities filled but stopped breathing and were left brain dead. She was given the maximum dosage of 5 different drugs. This occurred in Kailua, Hawaii.³¹
2. A 3 year old boy visited the dentist to have cavities fixed and was restrained in a papoose board to limit his movement when a local anesthetic was administered. He stopped breathing and later was found dead. This occurred in February 2012, in New Jersey.³²
3. A 4 year old boy visited the dentist to remove rotten teeth and cap some others. He died after having been giving an oral anesthetic. He was born with a hole in the heart which required surgery. This occurred in November 2011, in California.³³
4. A 17 year old man developed sepsis and died after having a root canal performed on a tooth which had lost a filling after he eat a piece of caramel. This occurred in February 2011, in Illinois.³⁴
5. A 4 year old female died in August 2010, while undergoing dental work in Oklahoma. Her death is believed to be linked to the sedation given.³⁵
6. A 5 year old boy died while having two fillings shortly before he was to begin school. After the fillings were complete he had a seizure and was taken to a hospital and died. This occurred in July 2010 in Georgia.³⁶

Death from Wisdom Teeth Removal

A 27 year old male who had *problem* wisdom teeth causing recurrent pain and gum infections removed (all four). Several days later his jaw became swollen and he had trouble swallowing. Over the course of the next few days he saw 3 different oral surgeons. Five days later he ended went to the emergency room with chest pains, breathing problems, a high pitched squeaky voice, a temperature of 104 degrees Fahrenheit. He was admitted to an intensive care unit (ICU) but continued to have bleeding, dense pneumonia, and heart arrhythmias. He had Ludwig's angina and died roughly 1 week after the extractions.³⁷

1. A 17 year old woman died around 1 week having wisdom teeth removed in June 2015. This occurred in Eden Prairie, Minnesota.³⁸
2. An 18 year old man died around 48 hours after having impacted wisdom teeth removed in February 2014. This occurred in Portland, Maine.³⁹
3. A 74 year old man died 7 days after having a mandibu-

lar wisdom tooth extracted in Japan. His cause of death was asphyxia resulting from airway obstruction that was caused by both deviation of the epiglottis and compression of the trachea due to cervical subcutaneous bleeding that resulted from postextraction bleeding. It is not clear when this occurred.⁴⁰

4. A 24 year old man died 3 days after having wisdom teeth removed in March 2013. He was given propofol as 1 of several sedatives and found to have 2 pieces of gauze in his airway.⁴¹

After the dental procedure the patient dies after few days or few weeks it is not clearly classified as dental death. Such type of cases are under debate whether it should be under dental death or not.⁴²

All of the cases do not take into account all of the grief and pain suffered by family members and friends. Nor do they account for in some cases the patient failing to properly take care of their teeth and gums. In some of these cases the patient had an underlying medical condition of which they either did not know about or failed to tell their dentist and/or doctors about. In a few cases the patient failed to tell their dentist and/or doctors about a medication they were taking. In some older cases it was shown that the person received alphasedation general anesthesia like halothane has been largely replaced by newer inhalation anesthetic agents such as sevoflurane, isoflurane and desflurane. Drug interaction particularly with nitrous oxide may have contributed to death in some cases. In some cases it is shown clear negligence like faulty and/or mixing up nitrous oxide and oxygen gas lines, inadequate monitoring of the patient, giving an overdose and lethal amount of medication, allowing a patient to suffocate on a cotton roll/ gauze pad, failing to properly account for the patient's underlying medical conditions and not understanding the pharmacology of the drugs administered,^{43,3} In a few cases, particularly with pediatric patients, but certainly possible with handicapped patients, placing them in a restraint such as a papoose board was a major contributor towards death. In a few cases, anaphylactic shock (an allergic reaction) occurred.⁴⁴

Legal aspects in dentistry

In the history of Indian legislation, enactment of Consumer Protection Act (CPA) 1986 clearly reveals the recognition and growth of consumer jurisprudence. The Consumer Protection Act is a compassionate social legislation that provides for protection of rights of the consumers and redressal of consumer disputes. CPA has provided for three tier quasi-judicial consumer dispute redressal mechanism at district, state and national level.

In 1995 by the Supreme Court of India in a landmark case of Indian Medical Association vs. VP Shanthi medical profession was also included within the ambit of CPA. The Act applies to all services, excluding goods for resale or for commercial purpose, services rendered free of charge and under a contract for personal service.⁴⁵

Initially there was a huge cry amongst the medical fraternity. But willingly or unwillingly, the truth was accepted by medical fraternity. Large number of patients is approaching the consumer courts for of their grievances against doctors and hospitals. So it is essential on the part of medical professionals to have adequate knowledge and awareness about CPA and its implication on their profession

In dental profession knowledge and skill is used for the service of others. Being a dental doctor, it carries with it a responsibility to society and patients. This responsibility should be at the core of the dental professional's ethical behavior.⁴⁶ The dental profession has seen unprecedented change during the last century.⁴⁷ Now a days the dentist decided what was best for the patient.⁴⁸ New alliance occurs between the dentist and patient, based on co-operation rather than confrontation, in which the dentist must understand the patient. Today patients are getting aware of their rights and make free choices and decisions on their treatment. So, there is a duty of the dentist to perform such obligation with proper care⁴⁹

Consent has formed an integral part of patient treatment and management. The concept of informed consent arises from the fundamental ethical principle of autonomy and rights of self-determination. The core idea of autonomy is one's action and decisions are one's own.⁵⁰ Examination of a patient to diagnose, to treat or to operate without his/ her consent amounts to an assault in law, even if it is beneficial and done in good faith. The dentist may be charged for negligence, if he/she fails to give the required information to the patient before obtaining his/ her consent to a particular interventional procedure.⁵¹ Sometimes patients are dissatisfied with the treatment they receive from their dentists. Such dissatisfaction can be resolved between the patient and the dentist but if not then the patient becomes a legally competent body which can judge whether the complaint is reasonable or not and if necessary, takes subsequent action against the dentist.⁵² Throughout the world, now patients becoming more aware of their right-legal literacy supplemented by modern legislation and it made the society increasingly compensation-oriented. India is no exception and, in recent years, it is shown there rise in the number of all classes of claims in which damages are sought for personal injuries-whether they are sustained in road accident, at the work place, or in health services.⁵³

Consumer Protection Act of 1986 was enacted for better protection of the interests of consumer grievances. This is done through judicial mechanisms set up at district, state, and national levels where consumers can file their complaints, which are entertained by the judicial bodies referred to as consumer forums. These consumer forums have been empowered to award compensation to aggrieved consumers for the hardships that they have endured.⁵⁴ Complaints from patients about dental treatment are on the increase internationally, especially in the USA^{55,56} Rudov et al. found that dentists accounted for 6.9% of all malpractice claims closed in 1970⁵⁷ The incidence rate of dentists with at least one claim

filed between 1988 and 1992 was 73 per 1,000 dentists. The number of dentists reporting at least one filed claim ranged from 11 per 1000 dentists in 1988 to 27 per 1000 dentists in 1992.⁵⁸ In UK, the situation is not different. The number of dentists reporting complaints has shown a gradual rise from 3.5% in 1989 to 10.7% in 1992.⁵⁹

CONCLUSION

Our society resolves most questions of professional liability by treating them as *torts* (literally, "wrongs") within the arena of civil law. Malpractice law has been, and continues to be, governed by certain basic concepts hammered out over a century-and-a-half of jurisprudence:

Dentist-patient relationship, occurs when a dentist accepts a patient for treatment. Breach of duty, that is, the failure of the dentist to treat the patient with the reasonable degree of judgment and skill ordinarily possessed by peers. Informed consent is important component for the dentist's duty by which the dentist can make an educated decision about treatment, it also helpful for patient to understand the risks and benefits of the proposed plan of care as well as the risks of not undergoing the recommended course of treatment. Treatment given without the patient's permission may be considered battery. Informed consent, an important component of the dentist's duty to patients. In order to make an educated decision about treatment, the patient must first understand the risks and benefits of the proposed plan of care as well as the risks of not undergoing the recommended course of treatment. Treatment given without the patient's permission may be considered battery. Proximate cause, i.e., the direct and major source of patient injury. To recover damages, the plaintiff must prove not only that the dentist violated the professional standard of care, but also that the injury would probably not have occurred had the dentist acted appropriately.

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