



A brief review on Child Abuse- Forensic Odontology aspects

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ABSTRACT-

Dentistry's application to the law is known as forensic odontology, which distinguishes the areas where the legal and dental professions interact. By utilizing his knowledge in a variety of areas, including mass catastrophes, child abuse and neglect, age determination, dental records, and oral damage that may have been unintentional or not, pedodontists play a significant role in forensic odontology. These dental results and records may be useful in forensic identification, which involves utilizing dentition to identify an unidentified person. Due to the physiologic changes, disease, and therapeutic benefits of teeth, information about their history persists throughout life and beyond.

Keywords: Child abuse, Child neglect, Forensic odontology, Dental Trauma

Introduction

The word "forensic" comes from the Latin word "forensis," which means "before the forum," or the location where legal issues are debated. According to Federation Dentaire Internationale, forensic dentistry is a subspecialty of dentistry that deals with the appropriate handling and investigation of dental evidence as well as the appropriate interpretation and portrayal of dental results in the interest of justice.¹ Child abuse is described as behaviours that deprive a kid of the chance to reach his or her full potential as a person on a physical, social, or emotional level. Any non-accidental injuries, neglect of basic requirements, or abuse perpetrated by a caregiver against a child was classified as child abuse by Kenney and Spencer in 1995 and Misawa in 2001 beyond what our culture considers to be decent child care.^{1,2}

It is crucial for dental professionals to have a clear understanding of abuse and the important terminology linked to neglect. The WHO (2020) defines child abuse as "maltreatment and neglect that occurs to children under 18 years of age". The definition includes "all types of physical and/or emotional ill-treatment, sexual abuse, neglect, negligence and commercial or other exploitation, which results in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power".³

History

To identify human remains and bite marks, forensic odontology uses dental evidence that is both physically present and biologically present. Dental trauma, which can

be brought on by sports, accidents, or maltreatment that is either deliberate or inadvertent, is a common finding in youngsters. Therefore, having the right information and using it effectively are crucial. By using their knowledge of the telltale signs and symptoms of child abuse and how to identify such victims, forensic odontologists can support the investigations of legal agents.³

A youngster experiences ongoing physiological changes, therefore each observation has to be carefully documented.

A dentist is the rightful owner of the dental record. Dental records may contain radiographs, study casts, prosthetics, pictures, and other clinical and laboratory testing.⁴

Infant and child abuse or maltreatment may be traced back to ancient times, and sadly, it is still common in today's society. An attempt has been made in recent years to identify child abuse and prevent it.^{4,5}

Today, there are a lot of committed people that work hard

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and nonstop to educate the public. Abuse has the potential to seriously harm a child's physical and mental health, or even result in death. The statistics on the prevalence of child abuse are not entirely clear.

It is challenging to determine the exact rate of child abuse since there are so many occurrences that go unreported. Because they frequently see the kid and parents interacting over the course of several visits and a significant amount of time, forensic dentists and oral doctors are in a unique position to identify and report cases of child abuse.⁵

Children's non-accidental injury is a serious issue that affects all socioeconomic, racial, and educational groups and occurs all over the world. Child abuse, child maltreatment, non-accidental injury, and child homicide are all terms that are difficult to believe exist in the 21st century.^{3,5}

Types of child abuse

- **Emotional abuse**

In order to have significant and long-lasting negative consequences on a kid's emotional development and wellbeing, there must be ongoing emotional maltreatment of the child. The child may be made to feel unimportant, ignored, isolated, humiliated, terrified, or yelled at.³

- **Sexual abuse**

This entails coercing or tempting a child, whether or not the child is aware of what is happening, to engage in sexual behaviours (including prostitution). It may entail both physical interactions like caressing, fondling, and penetration as well as non-physical ones like watching porn or influencing a young kid to act inappropriately. It takes a high degree of suspicion to identify sexual abuse, as well as knowledge with the physical, behavioural, and verbal signs of abuse. Discussions may be challenging due to guilt and shame.⁴

- **Neglect**

This is defined as the ongoing inability to satisfy a child's basic physical and/or emotional requirements, which may seriously harm the child's development and health. The denial of the child's needs for food, clothes, housing, supervision, education, or protection from injury or danger are examples of this. It's interesting to note that it may also apply to not getting the proper medical and dental care and treatment.^{3,6}

- **Fabricated or induced/imposed illness**

This was formerly known as Münchausen syndrome via proxy and is thought to be a mental illness in the offender.

This individual (typically the mother) purposefully creates, provokes, or exaggerates sickness (or another health issue), frequently in a kid. It is frequently explained by the offender's need for attention, but as a result, the youngster may undergo virtually pointless tests, investigations, and surgery.⁶

Unborn children may be at risk due to a mother's activities (such as substance misuse, trauma, etc.) or acts of violence committed against the expectant mother. A considerable portion of male partners' attacks on women start during the first pregnancy.²

All dental patient assessments are suggested to adhere to a comprehensive assessment and analysis. Particularly when trying to identify abuse victims, the dental professional's authority for signs of abuse may extend beyond dental and oral indications. This would indicate the need for enhanced vigilance regarding any physical injuries that are obvious and have an asuspicious look, location, or origin, any contradictory verbal testimony, and the outward behavior and demeanor of the kid who may have been neglected or mistreated. In order to support or justify notifying the appropriate authorities for additional investigations, it is also crucial to take into account the specifics that would make up an entire report.^{7,8}

Guidelines to signs and symptoms of child abuse and neglect

There are warning indicators that may indicate potential threats to a child's well-being as soon as they visit a dentist. The following elements, which are likely to coexist throughout the many forms of abuse, might be among these warning signs:

- **Physical appearance, behavior and demeanor of a child**

With the advantage of personal patient contact, the dental clinical setting offers a distinctive platform. The development of trust between the dentist and the patient is one of the essential components of a successful dental procedure. Dental practitioners should have experience in this area and should be well-equipped to see symptoms of abuse, both blatant and subtle, and draw conclusions from them.

From this vantage point, dental professionals should approach pediatric patients by observing both subtle and gross signs during their consultation and clinical examination. Specifically, the practitioner should be observing and analyzing the pediatric patient's demeanor and outward appearance, as well as their



behaviors and mannerisms and how they react to their environment.⁷

- **Poor hygiene and attire**

There is a level of sanitation and orderliness that most parents can attain with their children, even if many kids are known for resisting their parents' requests for clothing and bath times, especially in light of socioeconomic constraints. If this standard is not met, neglect issues may arise.

Before beginning a consultation, dental practitioners should assess a child's general cleanliness, physical attractiveness, and way of clothing. They should evaluate the child's appearance to see if it is messy and whether the youngster is dressed appropriately for the weather. It is possible to conceal bites, scars, and wounds by wearing clothing that seems improper. It is crucial to keep in mind that this element can be connected to low socioeconomic and cultural status; as a result, all individual aspects should never be taken into account in isolation but rather as a component of a much larger collection of problems.^{7,8,9}

- **Signs of malnourishment**

Children who are mistreated or disciplined risk being left to starve. If this happens frequently, it will have long-term effects. It has been noted that people who experienced malnutrition as newborns can exhibit higher degrees of physical neglect as they get older. This has been seen in connections that, despite adjusting for childhood level of living, remained statistically significant. Dental practitioners should take into account typical indications of malnutrition to be identified and discussed with the parent or caregiver and the kid as they may not be as obvious to non-health professionals. The warning indications include: lack of interest in eating, poor appetite, frequent illness with a sluggish rate of recovery, loss of focus, constant coldness, moodiness, not developing or gaining weight at the usual pace for their age, and they tire quickly.⁸

- **Developmental delays**

Children who have suffered abuse and neglect "are at an increased risk for a number of problematic developmental, health, and mental health outcomes, including learning problems," according to the Committee on Child Maltreatment Research, Policy, and Practice for the Next Decade: Phase II (2014).

"Inadequate attention and deficits in executive functions, problems relating to peers (example, peer rejection), internalising symptoms (example, depression, anxiety), externalising symptoms (example, oppositional defiant disorder, conduct disorder, aggression), and post-traumatic stress disorder (PTSD)" are just a few examples of the issues that children may experience. These children continue to have higher risks as adults for mental problems, drug abuse, life-threatening conditions, and decreased economic output. Therefore, dental practitioners should be able to spot developmental delays that are not explained by parents or other caregivers. This includes the social and behavioural symptoms that are listed below and that might become apparent over the course of several encounters.^{7,8}

- **Injuries at different stages of healing**

Dental professionals need to observe if a pediatric patient presents with any bruises, burns or wounds on the face or body that are at different stages of healing.

Scars and bruises are the most typical physical maltreatment manifestation that may be seen in children. Physically abused children frequently have bruises or injuries on their buttocks, limbs, ears, and soft tissue injuries that do not cover the bone. The cheeks are the area of the face that is most commonly affected in physical violence, according to observations. The youngster who has been physically abused will typically have bruises in the neck area that resemble a fingertip and are signs of "gripping" activity. There will be recognizable markings on the skin if a kid is physically assaulted with items like belts, which might lead to questions about whether the harm was intentional. A handprint may present as parallel linear spaced marks. Multiple bruises of different colors are indicative of various stages of healing and could be as a result of protracted abuse.⁷

Observations of the hard and soft tissues of the mouth and teeth in cases of child abuse.^{9,10}

- Tongue injuries
- Frenal laceration
- Bone fractures to the maxillofacial complex.
- Bruising and laceration of lips
- Mucosal bruising/laceration
- Tooth trauma (fractures, intrusion avulsion of teeth)



- Missing teeth (not explainable by decay or periodontal status)
- Single or multiple apical lesions, or fractured teeth in the absence of decay or unclear history.

Conclusion

Young adults who are small and vulnerable suffer from all forms of maltreatment, thus it is crucial that we dental team members be on guard. Children must be safeguarded because they rely on adults. Early participation of support organizations, early identification, early intervention, and education for struggling parents/families may help, but this requires money at the federal, state, and local levels; the focus is frequently on the symptoms, indicators, and effects rather than the root cause.

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