Detecting Child Abuse and Neglect: Are Dentists doing enough to reveal the “Dirty Secret”

Abstract
Child abuse is prevalent in every segment of the society and is witnessed in all social, ethnic, religious, and professional strata. Maltreatment of children includes physical, sexual or emotional abuse as well as child neglect. The long-term term effects of child abuse and neglect are painful and damaging. Among health professionals, dentists are probably in the most favourable position to recognize CAN, because 50% to 75% of reported lesions involve the mouth region, the face, and the neck. Besides dentists have a continuing relationship with their paediatric patients and their families, as it is necessary for a patient to be seen several times in a month. This fact not only gives the dentist a chance to the physical and psychological condition of a child but also the family environment. Despite all these opportunities in detecting child maltreatment, they seldom report suspected orofacial injuries. As members of the dental profession, we should realize that we find ourselves in a unique position to observe symptoms of child abuse. Providing the proper training to the dentists, we give them the power to participate actively in a process that may help to save the lives of otherwise helpless children.

Key Words
Child abuse and neglect; dentist; detection

INTRODUCTION
Child abuse and neglect is defined by the WHO as “Every kind of, physical, sexual, emotional abuse, neglect or negligent treatment, commercial or other exploitation resulting 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”. In recent years, the community has become increasingly aware of the problem of child abuse in the society. Child abuse is prevalent in every segment of the society and is witnessed in all social, ethnic, religious, and professional strata. Maltreatment of children includes physical, sexual or emotional abuse as well as child neglect. The long-term term effects of child abuse and neglect are painful and damaging. The victims are of a higher risk of becoming violent adult offenders. They often experience more social problems and perform less well in school. Survivor’s of sexual abuse tend to harbour feelings of low self esteem and extreme depression and often experience a higher than normal incidence of substance abuse and eating disorders. Statistics have been difficult to generate because child abuse is a secretive behaviour and because each province and territory compiles its own figures based on local definitions. Abusers come from all walks of life, regardless of socioeconomic status, educational, family, religious, or cultural background. Abuse isn’t less common in affluent families, it’s just hidden better. Among health professionals, dentists are probably in the most favourable position to recognize CAN, because 50% to 75% of reported lesions involve the mouth region, the face, and the neck. Besides dentists have a continuing relationship with their paediatric patients and their families, as it is
necessary for a patient to be seen several times in a month. This fact not only gives the dentist a chance to the physical and psychological condition of a child but also the family environment. Despite all these opportunities in detecting child maltreatment, they seldom report suspected orofacial injuries.

**History of child abuse and neglect**

Dr. Ambrose Tardieuin Paris, France wrote the first scientific paper on child abuse in 1860. He conducted a retrospective study of 39 children who “died at the hands of parents”. No mention of child maltreatment appeared in the literature until 1874. It was in that year that the case of “Mary Ellen” brought the issue of child maltreatment to light. While visiting an elderly parishioner, a church social worker learned about Mary Ellen, a child who had been beaten, bound, and neglected by her foster parents. The social worker found that she could do nothing to have the child removed from the home, so the church sought changes in the law to protect such children. Following the legal efforts to help Mary Ellen, the American Society for the Prevention of Cruelty to Children (ASPCA) was formed. The Mary Ellen case was championed under the auspices of the American Society for the Prevention of Cruelty to Animals (ASPCA) because she was deemed to be a human “animal”. The U.S. child labor laws of the early 1900’s made some inroads to prevent child maltreatment, but for decades virtually no other actions were taken to protect children. Current attitudes toward child maltreatment arise from the publication of “The Battered Child Syndrome” by Dr. C. Henry Kempe in 1962. Dr. Kempe’s message was that battered child syndrome should be considered in every differential diagnosis involving injuries to children. Specifically, he advocated that “abuse should be considered in any child exhibiting evidence of fracture of any bone, subdural haematoma, failure to thrive, soft tissue swelling, or skin bruising”. He later expanded the list of symptoms of child maltreatment to include retinal haemorrhages, hand print bruises, human bite marks, genital injuries, intraoral haematomas, and lacerations of the mouth. Kempe’s article immediately heightened awareness in the medical community. Because of the article, the problems of child abuse also gained public recognition for the first time. Within six months, the popular press had picked up on the story and spread it to the masses as in Life, 1963 “Cry Rises from Beaten Babies” and Good Housekeeping, 1964, “The Shocking Price of Parental Anger”. Further evidence of the effect of the Kempe’s article was that the Federal Children’s Bureau authored model legislation in 1963 for the states to address the problems of child maltreatment. The Federal Child Abuse Prevention and Treatment Act of 1974 mandated that every state have legislation aimed at protecting children. It also provided funding for research and established the National Center for Child Abuse and Neglect.[1] In 1992, six paedodentists in partnership with the Delta Dental Plan of Missouri and the Missouri State Dental Association started the P.A.N.D.A. program. P.A.N.D.A (Prevent Abuse and Neglect through Dental Awareness) is an educational program supported by a coalition of public and private organizations, and is aimed at helping dental office personnel recognize and report suspected cases of child abuse and neglect. In 1996, the Hamilton Academy of Dentistry (HAD) in Hamilton, introduced the P.A.N.D.A. program for the first time to its membership and Canadian dentists. In Ontario, the Rotary Club of Ancaster A.M. and the Ministry of the Solicitor General and Correctional Services have supported the program with grants for publication of a Canadian P.A.N.D.A. pamphlet.[5,6] Panda is now in 34 states in the United States and has 2 coalitions in Romania.[7,8] New York state for example, requires all dentists to complete a two hour course in the identification and reporting of child abuse.[9] Japan too, have made efforts in the urgent move to tackle this problem. On 20th November 2000, the prevention of child abuse law was brought into effect.[10,11]

**FORMS OF CHILD ABUSE**

Factors that affect abuse vary. While each individual is different, some risk factors, such as social isolation, poverty, past abuse and increased stress are known contributors to the potential for abuse.[12-15] However the different forms of child abuse are quite similar, these include:

**Physical Abuse**

Physical abuse is defined by WHO as the inflicting of physical injury upon a child. This may include burning, hitting, punching, shaking, kicking, beating or otherwise harming a child. The parent or caretaker may not have intended to hurt the child. It may, however, be the result of over-discipline or physical punishment that is inappropriate to the child's age.[16] Craniofacial, head, face, and neck injuries occur in more than half of the cases of child abuse. Careful intraoral and perioral examination is necessary in all cases of suspected abuse. Some
authorities believe that the oral cavity may be a central focus for physical abuse because of its significance in communication and nutrition. The injuries most commonly are inflicted with blunt trauma with an instrument, eating utensils, hands, or fingers or by scalding liquids or caustic substances. The abuse may result in contusions; lacerations of the tongue, buccal mucosa, palate (soft and hard), gingival alveolar mucosa or frenum, fractured, displaced, or avulsed teeth; facial bone and jaw fractures; burns; or other injuries. These injuries, including a lacerated frenum, also can result from unintentional trauma. Discoloured teeth, indicating pulpal necrosis, may result from previous trauma. Gags applied to the mouth may leave bruises, or scarring at the corners of the mouth. Multiple injuries, injuries in different stages of healing, injuries inappropriate for the child’s stage of development, or a discrepant history should arouse suspicion of abuse. Age-appropriate non abusive injuries to the mouth are common and must be distinguished from abuse on the basis of history, the circumstances of the injury and pattern of trauma, and the behaviour of the child, caregiver, or both. Consultation with or referral to a paediatric dentist is appropriate.\[17\]

**Sexual Abuse**

According to WHO sexual abuse is inappropriate sexual behaviour with a child. It includes fondling a child's genitals, making the child fondle the adult's genitals, intercourse, incest, rape, sodomy, exhibitionism and sexual exploitation. To be considered ‘child abuse’, these acts have to be committed by a person responsible for the care of a child (for example a baby-sitter, a parent, or a daycare provider), or related to the child. If a stranger commits these acts, it would be considered sexual assault and handled solely by the police and criminal courts.\[16\] The oral cavity is a frequent site of sexual abuse in children. The presence of oral and perioral gonorrhoea or syphilis in pre pubertal children is pathognomonic of sexual abuse. Pharyngeal gonorrhoea is frequently asymptomatic. Therefore, when a diagnosis of gonorrhoea is suspected, lesions should be sought in the oral cavity, and appropriate cultures should be obtained even if no lesions are detected. Detection of semen in the oral cavity is possible for several days after exposure. Therefore, during examination of a child who is suspected of experiencing forced oral sex, cotton swabs should be used to swab the buccal mucosa and tongue, with the swabs preserved appropriately for laboratory analysis of the presence of semen. Unexplained erythema or petechiae of the palate, particularly at the junction of the hard and soft palate, may be evidence of forced oral sex.\[18\] While cases of syphilis are rare in the sexually abused child, oral lesions also should be sought and dark-field examinations performed.\[17\]

**Emotional Abuse**

Emotional abuse is also known as verbal abuse, mental abuse, and psychological maltreatment. It includes acts or the failures to act by parents or caretakers that have caused or could cause, serious behavioural, cognitive, emotional, or mental trauma. This can include parents/caretakers using extreme and/or bizarre forms of punishment, such as confinement in a closet or dark room or being tied to a chair for long periods of time or threatening or terrorizing a child. Less severe acts, but no less damaging, are belittling or rejecting treatment, using derogatory terms to describe the child, habitual tendency to blame the child or make him/her a scapegoat.\[16\]

**Bite Marks**

Bite marks are lesions that may indicate abuse. Bite marks should be suspected when ecchymoses, abrasions, or lacerations are found in an elliptical or ovoid pattern. Bite marks may have a central area of ecchymoses (contusion) caused by 2 possible phenomena: (1) positive pressure from the closing of the teeth with disruption of small vessels or (2) negative pressure caused by suction and tongue thrusting. The normal distance between the maxillary canine teeth in adult humans is 2.5 to 4.0 cm, and the canine marks in a bite will be the most prominent or deep parts of the bite. Bites produced by dogs and other carnivorous animals tend to tear flesh, whereas human bites compress flesh and can cause abrasions, contusions, and lacerations but rarely avulsions of tissue. If the inter canine distance is less than 2.5 cm, the bite marks probably have been caused by a child. If the inter canine distance is 2.5 to 3.0 cm, the bite was probably produced by a child or a small adult; if the distance is more than 3.0 cm, the bite was probably by an adult.\[18\] The pattern, size, contour, and colour of the bite mark should be evaluated by a forensic odontologist or a forensic pathologist if an odontologist is not available. If neither specialist is available, a paediatrician or paediatric dentist experienced in the patterns of child abuse injuries should observe and document the bite mark characteristics photographically with an identification tag and scale marker in the
photograph. The photograph should be taken at a right angle (perpendicular) to the bite. Written observations and photographs should be repeated daily for at least 3 days to document the evolution and age of the bite. Because each person has a characteristic bite pattern, a forensic odontologist may be able to match dental models (casts) of a suspected abuser’s teeth with impressions or photographs of the bite.

**Dental Neglect**

Dental neglect, as defined by the American Academy of Paediatric Dentistry, is “the wilful failure of parent or guardian to seek and follow through with treatment necessary to ensure a level of oral health essential for adequate function and freedom from pain and infection.” Dental caries, periodontal diseases, and other oral conditions, if left untreated, can lead to pain, infection, and loss of function. These undesirable outcomes can adversely affect learning, communication, nutrition, and other activities necessary for normal growth and development. Failure to seek or obtain proper dental care may result from factors such as family isolation, lack of finances, parental ignorance, or lack of perceived value of oral health. The point at which to consider a parent negligent and to begin intervention occurs after the parent has been properly alerted by a health care professional about the nature and extent of the child’s condition, the specific treatment needed, and the mechanism of accessing that treatment. The physician or dentist should be certain that the caregivers understand the explanation of the disease and its implications and, when barriers to the needed care exist, attempt to assist the families in finding financial aid, transportation, or public facilities for needed services. Parents should be reassured that appropriate analgesic and anaesthetic procedures will be used to assure the child’s comfort during dental procedures. If, despite these efforts the parents fail to obtain therapy, the case should be reported to appropriate child protective services. Signs and symptoms of these various types of abuse, as well as documentation and reporting procedures, are described thoroughly in the dental literature.

**EFFECTS OF CHILD ABUSE AND NEGLECT**

The immediate physical effects of abuse or neglect can be relatively minor (bruises or cuts) or severe (broken bones, haemorrhage, or even death). In some cases the physical effects are temporary; however, the pain and suffering they cause a child should not be discounted. Meanwhile, the long-term impact of child abuse and neglect on physical health is just beginning to be explored. It can be Shaken baby syndrome -Shaking a baby is a common form of child abuse. The injuries caused by shaking a baby may not be immediately noticeable and may include bleeding in the eye or brain, damage to the spinal cord and neck, and rib or bone fractures. Impaired brain development-Child abuse and neglect have been shown, in some cases, to cause important regions of the brain to fail to form or grow properly, resulting in impaired development. These alterations in brain maturation have long-term consequences for cognitive, language, and academic abilities. Poor physical health- Several studies have shown a relationship between various forms of household dysfunction (including childhood abuse) and poor health. Adults who experienced abuse or neglect during childhood are more likely to suffer from physical ailments such as allergies, arthritis, asthma, bronchitis, high blood pressure, and ulcers. Survivor’s of sexual abuse tend to harbour feelings of low self esteem and extreme depression and often experience a higher than normal incidence of substance abuse and eating disorders.

**Child abuse across the globe**

The UN Secretary General’s Study on Violence against Children has given the following overview of the situation of abuse and violence against children across the globe.

- WHO estimates that almost 53,000 child deaths in 2002 were due to child homicide.
- In the Global School-Based Student Health Survey carried out in a wide range of developing countries, between 20% and 65% of school going children reported having been verbally or physically bullied in school. Similar rates of bullying have been found in industrialised countries.
- An estimated 150 million girls and 73 million boys under 18 have experienced forced sexual intercourse or other forms of sexual violence involving physical contact.
- UNICEF estimates that in sub-Saharan Africa, Egypt and Sudan, 3 million girls and women are subjected to FGM (female genital mutilation) every year.
- ILO estimates that 218 million children were involved in child labour in 2004, among these 126 million were engaged in hazardous work. Estimates from 2000 suggest that 5.7 million
were in forced or bonded labour, 1.8 million in prostitution and pornography and 1.2 million were victims of trafficking.

- Only 2.4% of the world's children are legally protected from corporal punishment in all settings.

**Child abuse in India**

Child abuse is shrouded in secrecy and there is a conspiracy of silence around the entire subject. In fact there is a well entrenched belief that there is no child abuse in India and certainly there is no sexual abuse in the country.\[^{31}\] Further, certain kinds of traditional practices that are accepted across the country, knowingly or un-knowingly amount to child abuse. Existing socio-economic conditions also render some children vulnerable and more at risk to abuse, exploitation and neglect. Hence Statistics have been difficult to generate because child abuse is a secretive behaviour and also each province and territory compiles its own figures based on local definitions. A national survey conducted by the Ministry of women and child development, Government of India in 2007 with partnership from UNICEF reveals that it is young children, in the 5-12 year group, who are most at risk of abuse and exploitation, and in that: \[^{31}\]

### Physical Abuse

1. Two out of every three children were physically abused.
2. Out of 69% children physically abused in 13 sample states, 54.68% were boys.
3. Over 50% children in all the 13 sample states were being subjected to one or the other form of physical abuse.
4. Out of those children physically abused in family situations, 88.6% were physically abused by parents.
5. 65% of school going children reported facing corporal punishment i.e. two out of three children were victims of corporal punishment.
6. 62% of the corporal punishment was in government and municipal school.
7. The State of Andhra Pradesh, Assam, Bihar and Delhi have almost consistently reported higher rates of abuse in all forms as compared to other states.
8. Most children did not report the matter to anyone.
9. 50.2% children worked seven days a week.

### Sexual Abuse

1. 53.22% children reported having faced one or more forms of sexual abuse.
2. Andhra Pradesh, Assam, Bihar and Delhi reported the highest percentage of sexual abuse among both boys and girls.
3. 21.90% child respondents reported facing severe forms of sexual abuse and 50.76% other forms of sexual abuse.
4. Out of the child respondents, 5.69% reported being sexually assaulted.
5. Children in Assam, Andhra Pradesh, Bihar and Delhi reported the highest incidence of sexual assault.
6. Children on street, children at work and children in institutional care reported the highest incidence of sexual assault.
7. 50% abuses are persons known to the child or in a position of trust and responsibility.
8. Most children did not report the matter to anyone.

### Emotional Abuse and Girl Child Neglect

1. Every second child reported facing emotional abuse.
2. Equal percentage of both girls and boys reported facing emotional abuse.
3. In 83% of the cases parents were the abusers.
4. 48.4% of girls wished they were boys.

### LEGISLATION

The Indian Academy of Paediatricians (IAP) has formulated new guidelines for paediatricians and other doctors on how to recognise and respond to child abuse, particularly sexual abuse. This has been done to help doctors treat abused children effectively and to keep an eye on suspicious cases.\[^{32}\] The guidelines, prepared by IAP in consultation with National Commission for Protection of Child Rights (NCPCR) and Unicef, have been drawn from United Kingdom’s child rights law. Under new rules, doctors will be required to report all cases of abuse, including suspicious ones, to the police, NGOs and child helplines. Doctors are protected by law in case of erroneous reporting, as long as it is in good faith. But they can be penalised if they fail to report under the proposed Prevention of Offences against Children (POC) law, which includes a two-year jail term. “There are no uniform guidelines for paediatricians regarding their response to child abuse even though they are often the first contact of a child who has suffered abuse. These guidelines will train them how to document, record and report instances of abuse. The basic rules include admission to hospital in cases of serious injuries but a child may be also admitted in case it is felt there is
an immediate threat to his safety at home. Doctors are to watch out for and record nonverbal cues as ‘watchful frozenness’, sad mood, avoidance of eye contact, etc. In case of sexual abuse doctors have to specifically record if there is resistance to examination, dissociation [going to sleep during examination], general demeanour, pallor, bruises, vitamin deficiencies. New Zealand child protection legislation makes it clear that all adults have a moral but not a legal obligation to report suspicions of child maltreatment.[33] This differs from the United States of America, Canada and most of Australia, where healthcare practitioners, teachers, day-care workers, child protective agencies and even commercial film and photographic print processors are required by law to report suspected cases to social services or law enforcement agencies. Western Australia is the only state where reporting is not mandatory. In California, failure to report a suspected case can result in a misdemeanor charge, with a maximum sentence of one year in jail and a fine of up to $1000. The law may also leave a practitioner open to additional civil liabilities that may not be covered by malpractice insurance. The fine in South Australia is $2500, and to date, compulsory reporting legislation has been successfully resisted in the United Kingdom, the Republic of Ireland and New Zealand. Despite the penalties that can be incurred in mandated states, several studies regarding child abuse reporting practices throughout these states have shown that only 0.32% of all reports are made by dental practitioners. This is a thought-provoking statistic.[33]

**How to detect child abuse in a dental clinic?**

Cases with incomplete histories or injuries with inadequate explanations should raise concern about either non accidental injury or neglect. This also holds true where there are obvious discrepancies between the clinical findings and the history given by the parent. Delay in seeking treatment for the injury should also be viewed with suspicion because it indicates a high risk of abuse.

**Other possible indicators could include:**
- A history of previous accidents/multiple injuries.
- An adult other than the child’s parent/s seeking medical assistance for the child.
- The injuries are attributed to a sibling.
- Verbal and non-verbal clues are also of great significance during this identification process.

The following should lead the dentist to conduct further investigations, for example:
- Aggressive behaviour.
- Flinching from touch.
- Apparent unawareness of his/her surroundings.
- Wary of parents, refuses to make eye contact or expresses fear of being touched.
- Watchful and constantly moving eyes.
- Strange, sophisticated or otherwise unusual sexual behaviour or knowledge.
- A seductive attitude or promiscuous talk inappropriate for a child’s age may be indicative of sexual abuse (in such cases, the child should be examined for possible mucosal lesions).
- The presence of unusual clothing for a particular season, as these could be hiding bruises.

The dental team should observe the physical condition of every child as he/she enters the clinic. Particular attention should be paid to whether the child is walking with a limp, favouring the use of a particular limb or body part, and his/her ability to sit without difficulty. The dental team should also be aware that children with mental, physical or emotional disabilities are particularly vulnerable and at a greater risk for abuse, presumably due to the increased demand and subsequent stress involved in their care.

**WHY ARE DENTISTS RELUCTANT TO REPORT?**

The major barrier in diagnosing and reporting is the lack of proper training either in the undergraduate curricula or in postgraduate continuing education courses.

**Other reasons include:**
- Ignorance of the seriousness of such maltreatment.
- Fear of legal involvement.
- Fear of confrontation with the family.
- Limited confidence in the child protection services.
- Fear of losing patients.

**CONCLUSION**

The intend of this article is to show every dental professional that a thorough understanding of their involvement in this issue can lead to a feeling of acceptance - an acceptance that we can do something to stop this awful epidemic. Because a majority of the physical trauma to children occurs in the face and neck area, dentists are ideally positioned to detect possible abuse. Research has shown that practicing dentists recognized a need for more training and additional information to help
them deal with child abuse/neglect-related issues.[34,35] Crying or speaking emanates from the mouth, this area is frequently the focus of attack in cases of violent child abuse. The dentist's mission involves knowing the signs of child abuse and neglect and fulfilling the legal and moral obligation to prevent further abuse by documenting the injuries and reporting the matter to the police or social welfare agency. The practitioner should remember that incorrect or irresponsible accusations of child abuse can have a devastating effect upon the life of an innocent individual. Child abuse is a complex problem with many causes. As members of the dental profession, we should realize that we find ourselves in a unique position to observe symptoms of child abuse. Providing the proper training to the dentists, we give them the power to participate actively in a process that may help to save the lives of otherwise helpless children. Infants and children are helpless to the abusive adult. Their physical injuries can range from mild to extreme and may result to their death. Cruelty to children won't end until there is a major change of attitude towards them. Abuse is suspected, must be reported! The ultimate goal is to save children's lives.

REFERENCES