



## Full Length Research Article

### THE IMPACT OF CHILD ABUSE TO THE DENTOCRANIOFACIAL GROWTH IN CHILDREN

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#### ABSTRACT

The community has become increasingly aware of child abuse in society. Child abuse is the non accidental physical injuries which are within the scope of dentistry or easily observed by dental professional in the course of routine dental treatment. This paper will discuss the importance of an early recognition by dental practioners because a high proportion of abused children suffer injuries to the face and head, including the oral and perioral region which could have an impact to dento-craniofacial growth and development in children. In conclusion the ability to properly identify suspicious injuries to head, face, mouth and neck, of a child is imperative for dental practioners.

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## INTRODUCTION

Cases of child abuse (child abuse) showed a significant increase in Indonesia. According to the National Commission for Protection of children child abuse cases in 2009 occurred in 1522, while cases in 2011 to 2508 cases in Jakarta. The definition of child abuse is physical violence, sexual, emotional mistreatment, or neglect of children. Center for Disease Control and Prevention (CDC) defines child abuse as any act or series of acts or omissions guardian by a parent or other caregiver that can be dangerous, or potentially dangerous, dangerous or pose a threat to children. Most child abuse happens in the child's own home, school or organization and environment where children interact (Tsang and Sweet, 1999). Four types of child abuse include: (1) physical violence, the physical aggression such as hitting, punching, pushing and kicking the child that causes injury to a child. It is usually related to the enforcement of discipline in children; (2) sexual violence, as violence to sexual stimulation such as asking or forcing a child to engage in sexual activities, including exposure to child pornography; (3) psychological violence, is a form of violence such as insults with words, ridicule, and social isolation; (4) neglect (*neglect*), is the failure of parents to meet adequately the needs of the child such as physical, psychological, and health education (Tsang and Sweet, 1999).

Cases of child abuse that occurred at Bangkinang horrendous, Riau recently that a boy aged 8 years experience violence by their parents. According to the results of the examination the doctor found cutting the tip of the tongue and genitals of victims is estimated to have occurred a long time. Data cases of child abuse have not been properly recorded entirely in Indonesia, and the public is not fully aware of the devastating impact of violence on children in the future. Child abuse can affect the physical damage, cognitive and psychological disorders that affect in adulthood. According to Tsang, *et al* Short-term effects may include disruption of confidence, emotional control, and nightmares and sleep disturbances, whereas the long-term effects of child abuse are depression, sexual dysfunction, social disorder and suicidal (Tsang and Sweet, 1999). The results showed a 50% incidence of child abuse occurs in the neck and head. Therefore, dentists and pediatric dentists in particular have an important role to detect kekerasan in children. The mechanism of detecting the presence of violence in children have not been given special attention dentists and pediatric dentists, therefore, this paper aims to provide insight into the management of cases of child abuse were found in the practice room, as well as the impact of violence on children to grow dentocraniofacial (Uldum *et al.*, 2010 and Rai *et al.*, 2011).

## DETECTION OF VIOLENCE IN CHILDREN

Child abuse can occur in a variety of social groups in the community, not limited to a weak socio-economic groups.

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Several factors contribute to the occurrence of child abuse is the presence of psychological distress in the family. Psychological distress in the family can include financial capabilities, the separation of family members, the head of the family is not working, and many family members in one house. According to Waldman perpetrators of child abuse are usually relatively young, often under the age of 25 years and have normal intellectual capabilities (Tsang and Sweet, 1999; Uldum *et al.*, 2010 and Santos *et al.*, 2007). Dentists have a greater chance to detect child abuse, but it is often not reported. Some of the factors that cause the dentist did not report child abuse is a lack of awareness and knowledge of the management of cases of child abuse. Reporting cases of child abuse by dentists in developed countries like America and Canada as well there are still some obstacles such as concern for parents involved with anger and loss of patients. The results showed that dentists have received training case management of child abuse cases reported five times more than the dentist without training (Bey *et al.*, 2011 and Cairns *et al.*, 2005).

### **Detection Clinical Management of Violence on Children**

Screening of cases of child abuse should be part of the clinical examination and systematically conducted. Therefore, dentists should always be alert for any injury, especially in cases of trauma, although not all the injury caused by child abuse. Dentists and dentists in particular children often perform ongoing maintenance, it allows dentists to observe the relationship between parent and child, the child's behavior changes seta in the clinic. Some things to detect cases of child abuse to be aware of the dentist in the clinic is (Tsang and Sweet, 1999; Uldum *et al.*, 2010 and Santos *et al.*, 2007)

#### **Child screening while in the waiting room**

Note the behavior of children who show an unusual thing, besides the state of child nutrition and proper condition dress. Dentist should be aware if there are bruises on the body and face. In addition, note the child's behavior toward other children, usually children who have suffered violence and aggressive behavior are less able to control the emotions, or the child showed the opposite behavior, namely isolate themselves.

#### **Extra Oral Examination**

Extra-oral examination includes examining facial asymmetry, swelling, and bruising are also on the other limb. In addition, note the differences in skin color that indicates the degree of the wound healing process, as well as a variety of lesions caused by bites, cigarette, and buckle. Examination of the central area of the face including the presence of bruising and petechiae on the sclera, eye and nose, as well as blood clots in the nasal cavity.

#### **Intra Oral Examination**

Intra-oral examination includes examining the lips and lip corners, consider if there is swelling and bruises. In addition, examination due to rupture of the frenulum frenulum may not occur due to an accident. Fracture and tooth loss that occurs in children should be examined and evaluated carefully.

### **VIOLENCE CASE MANAGEMENT IN CHILDREN**

The dentist should be able to identify the injury caused by accident or trauma of child abuse, injury due to trauma usually found on uniplanar area (ie the area that is located on the front surface of the body). This is in contrast to injury due to child abuse that is multiplanar. The next stage dentist should do a history of the injury, should parents and children were asked separately and both answers were compared to the occurrence of injury. History is expected to separate cause injury due to an accident or injury as a result of deliberate violence. Dentists may not use questions that have a tendency to accuse, it can avoid a confrontation with a parent or caregiver (Tsang and Sweet, 1999 and Uldum *et al.*, 2010). The results support the possibility that a history of violence, among others: (1) the absence of a clear explanation for the occurrence of injury; (2) an explanation of the parents or guardian of the injury is not consistent or capricious; (3) an explanation of the parents are not in accordance with the pattern of injuries, long or severity of injury; (4) an explanation of injury that occurs not in accordance with the pattern of development of the child; (5) the existence of different explanations between parent, child or several witnesses regarding the injury (Rai *et al.*, 2011; Santos *et al.*, 2007 and Bey *et al.*, 2011).

Suspicion of child abuse must be systematic recording includes the location, size, and distribution of injury severity accompanied by a photo (with pengaris injury that can be estimated size of the injury) and radiographic examination. If there is any doubt as to report the case to authorities, the dentist should consult with a general practitioner, a pediatrician or a local authority social worker (Santos *et al.*, 2007; Bey *et al.*, 2011 and Cairns *et al.*, 2005). Protocol management of child abuse cases in developed countries has been organized, while in Indonesia, like many other developing countries have not established a clear system order. Stages handling of suspicions child abuse in developed countries like America are: (1) ask the child to get inpatient treatment at the hospital. The purpose of the provision of inpatient care is to provide protection to the child until the condition of the house safely. (2) provide treatment to the injury suffered by the child; (3) conduct laboratory examinations are needed, for example, radiographic examination; (4) make a record of an injury suffered by a child with a complete and systematic; (5) to make the diagnosis of injury, if necessary, referral to a pediatrician; (6) notify parents about the diagnosis has been made and the obligations of health professionals to make reports of acts of violence on the children to the authorities; (7) The rule of law in America is a complete reporting child abuse watu within 36 hours; (8) involves the active participation of parents for children hospitalized in the hospital.

Indonesian Pediatric Association (IDAI) recommend penataksanaan cases of child abuse that is every child's doctor has an obligation to inform the Crisis Center Hospital / police / Indonesian Child Protection Commission (KPAI) or Integrated Services Center of Women and Children (P2TP2A) if found suspicion of child abuse, at least over the phone. Indonesian Child Protection Commission address email: [informasi@kpai.go.id](mailto:informasi@kpai.go.id) tel: 021-31901446 / 021-3900833, and for the Integrated Services Center of Women and Children (P2TP2A) Jakarta can phone the 021 number 47882898 or sms

to 081317617622 (<http://http://idai.or.id/professional-resources/recommendation/violence-against-anak.html>).

## IMPACT ON VIOLENCE AGAINST CHILDREN STRUCTURE DENTOKRANIOFASIAL

The results showed 50% of cases of child abuse occurs in the region of the head, face and neck. In addition, some experts argue that the oral cavity may be the main focus of the detection of the presence of child abuse therefore closely related to communication and nutrition. Injury to the oral cavity caused by child abuse can be in the form of bruises, burns, and lacerations of the tongue, oral mucosa, frenulum, hard palate and lips. In addition, there can be avulsed teeth, crowns and alveolar bone fracture, and fracture of the jaw (Calvacante, 2010 and Duffy *et al.*, 2010). The results showed injury to the lips occurred almost 54% of cases of child abuse followed by lacerations of the oral mucosa, gingiva and tongue. Research in Boston, USA 386 shows the results of injury that occurs as a result of child abuse 33% in the head, 61% in the facial area, 6% in the intra-oral region. The results showed intra oral lesions have slightly compared with the percentage of injury to the face, it is likely that general practitioners are not used to diagnose cases of the condition of intra-oral (Bey *et al.*, 2011).

Another study conducted by *the American Board of Pedodontics* shows the result of child abuse in the region is 32% dentokraniofasial tooth fracture, 24% bruising in the lip mucosa, oral laceration 14%, 14% fracture of the maxilla and mandible, and 5% burns to mucous Oral (Cairns *et al.*, 2005). Injury to the area can disrupt normal growth dentokraniofasial dentokraniofasial structure, because violence is more common in children under six years of age. This must be a concern that child abuse can also interfere with optimal growth dentokraniofasial structure. The impact of child abuse that occurs in the neck and head can result in damage to the growth center, due to malposition of the fracture and the formation of scar tissue. Examples of cases of child abuse in the head and neck as well as its long-term impact, the case A abused at the age of 6 months, prior to the injury to the child has a normal mouth opening, then after 18 months after the opening of the mouth bnerkurang violence as much as 2 cm, the diagnosis on 2 year old child has temporomandibular joint ankylosis. Another case of children aged 3 years experienced a blow to the face, resulting in a fracture of the condyle head, then carried out the treatment and immobilization mounting plate and seven years later the child had mandibular asymmetry (Duffy *et al.*, 2010).

## DISCUSSION

Every child who comes to the clinic due to trauma should be identified due to the possibility of child abuse. A careful history without accusing impression to children and parents separately to determine the cause of the trauma sebenenarnya. The most common form of injury is bruising and burns lesions, usually on the lesions contained impressions of tools used to commit violence as a blunt object, belts, cigarette burns. Dentist as clinicians should be able to determine the compatibility between injury with activity, age or developmental stage of the child, for example a child who is learning to walk the possibility of bruising is in areas that are

not typical such as the extremities and hands (Uldum *et al.*, 2010 and Rai *et al.*, 2011). Some common clinical signs that can be found on the child victims of violence is a change in behavior, the child looks unkempt and dirty, malnourished and found several bruises with various levels of the healing process. In addition, the child showed very aggressive behavior, cannot control emotions or behave otherwise like to isolate themselves (Tsang and Sweet, 1999). Thorough clinical examination and systematic can be used to diagnose cases of child abuse. Examination performed on the face and body, as well as the scalp and behind the ears. In addition, a thorough examination of the existence of the bite wound area was not caused by the bite yourself. Intra-oral examination is also important to be as bruising and burns on the corner of the lip can be caused by child abuse (Santos *et al.*, 2007 and Bey *et al.*, 2011). Some of the factors that cause the dentist did not report cases of child abuse, namely: (1) lack of skills in determining the signs and symptoms of child abuse cases; (2) the reluctance in participating in the judicial process; (3) concerns the impact on the continuity of the dental practice. According to Blain *et al* claim that if the dentists are trained case management of child abuse will increase confidence in the diagnosis of such cases. This can increase the number of cases diagnosed and reported by the dentist (Loulouliadis and Stravianos, 2010). The involvement of dentists in the handling of child abuse has two advantages, namely to increase awareness of child abuse cases, and can also conduct training outside the health professions for the detection of child abuse. The role of the dentist is not just limited to diagnosing cases but also can increase public awareness of child abuse cases. Various ways can be done is to create a pamphlet in clinical, counseling for children in school, or by writing an article about child abuse that can be read by the public (Tsang and Sweet, 1999 and Uldum *et al.*, 2010).

## Conclusion

Every child has the right to be cared for, educated and protected in the family and community environment, it can be achieved if everyone in the community has awareness on children's rights. Children who experience violence have the potential to behave the same in his adult life. Everyone is obliged to prevent and protect children against violence because it may prevent further casualties in the future.

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