

Ivana Čuković-Bagić

Uloga doktora dentalne medicine u prepoznavanju zlostavljane djece

The Role of Dentists in Recognition of Child Abuse

Zavod za dječju i preventivnu stomatologiju, Stomatološki fakultet Sveučilišta u Zagrebu
Department of Pediatric and Preventive Dentistry, School of Dental Medicine University of Zagreb

Sažetak

Rano prepoznavanje zlostavljanog djeteta jedan od vrlo aktualnih zadataka, a istodobno je i moralna te zakonska obveza svih medicinskih stručnjaka koji se bave djecom. Zlostavljanje podrazumijeva nekoliko kategorija: zanemarivanje te emocionalno, fizičko i seksualno zlostavljanje. Zanemarivanje je najčešći oblik zlostavljanja djece. U dentalnomedicinskoj literaturi poznat je i pojam dentalnog zanemarivanja, kao podvrste medicinskog zanemarivanja. Kao najčešći pokazatelji navode se neliječen rani dječji karijes („early childhood caries“) koji ima dugoročne posljedice na opće zdravlje i nerijetko je samo izdvojen simptom opće zanemarenog djeteta, zatim neliječena bol, upala, krvarenje ili trauma u sklopu orofacijalnog područja te odgođeno traženje dentalnomedicinske pomoći. Adekvatno znanje svih članova dentalnomedicinskog tima o simptomima različitih oblika zlostavljanja nužan je preduvjet za otkrivanje zlostavljanja i pružanje pomoći zlostavljanom djetetu u dentalnomedicinskoj praksi.

Zaprimljen: 18. studeni 2010.
Prihvaćen: 2. prosinca 2010.

Adresa za dopisivanje

Prof.dr.sc. Ivana Čuković-Bagić
Sveučilište u Zagrebu
Stomatološki fakultet
Zavod za dječju i preventivnu
stomatologiju
Gundulićeva 5, 10 000 Zagreb, Hrvatska
Tel: 00 385 1 4802 110
bagic@sfzg.hr

Ključne riječi

zlostavljanje djece; etika, stomatološka;
djeca, pacijent-liječnik odnos

Uvod

Djeca imaju pravo na zaštitu od zlostavljanja i zanemarivanja te svih oblika tjelesnog i duševnog nasilja, zatim imaju pravo na zdravstvenu zaštitu, liječenje i oporavak od bolesti, na vodu za piće, hranu i čist okoliš. Ta su prava definirana u Konvenciji o pravima djeteta Ujedinjenih naroda koja je prihvaćena 1989. godine, a naša je država supotpisnica toga međunarodnog sporazuma od 1992. (1).

Od liječnika dentalne medicine očekuje se, u vezi sa zaštitom djece od nasilja, odgovorno djelovanje (*responsibility*). To obuhvaća prepoznavanje (*recognize*), dokumentiranje (*record*), prijavljivanje (*report*) i upućivanje (*refer*) – takozvani 4R prema anglosaksonskom nazivlju (2). Svi članovi dentalnomedicinskog tima, poput administratora, medicinske sestre, zubne asistentice, dentalne higijeničarke, a ne samo liječnika, imaju prema poslu koji obavljaju iznimno važnu ulogu u otkrivanju i prevenciji zlostavljanja - od dogovaranja termina, prvog susreta u ordinaciji, anamneze, vođenja dokumentacije o pacijentu do dentalnomedicinske obrade. U zemljama u kojima postoje dentalni higijeničari, smatra se da je njihova zadaća vrlo važna jer oni obavljaju prvi pregled pacijenta, rade neke male zahvate, a često imaju i više vremena za komunikaciju s pacijentom od liječnika (3,4). Istraživanja pokazuju da je nedostatak znanja članova dentalno-

Introduction

Children are entitled to protection from abuse and neglect and all types of physical and psychological violence, they have the right to health protection, treatment and recovery from disease, the right to drinking water, food and clean environment. These rights are defined in the Convention on children's rights by the United Nations that was accepted in 1989. Croatia signed the Convention in 1992 (1).

Doctors of dental medicine are expected to act responsibly with regards to the protection of children from violence. This requires the dentist to recognize, record, report and refer – the four Rs – such practice (2). All members of the dental team, such as administrators, assistants, nurses, hygienists, and not only the doctors, have an immensely important role in recognition and prevention of abuse; from the appointment set-up, first visit to the dental office, medical/dental history, documents, all the way to actual treatment. In countries that have dental hygienists it is considered that their role is especially important, since they perform the first examination, provide minor treatment, and usually have more time for interaction with the patient than the doctor (3,4). Investigations show that the lack of knowledge often represents an obstacle in recognition and report of neglect and abuse, so

medicinskog tima zapreka u prepoznavanju i prijavljivanju zanemarivanja i zlostavljanja, te da je potrebna kontinuirana izobrazba mnogih stručnjaka uključenih u pružanje medicinskih usluga (5-9).

Dječja i preventivna stomatologija predstavljaju specijalističko područje u sklopu kojega se obavljaju zahvati primarne dentalnomedicinske skrbi te suvremeni preventivni, dijagnostički i terapijski postupci kako bi se sačuvalo oralno zdravlje dojenčadi, djece i adolescenata (10). Dakle, doktor dentalne medicine može tijekom dentalnomedicinskog zahvata ili pregleda vidjeti ozljede na glavi, licu, vratu ili rukama, to više što istraživanja govore da se od 50 do 75,5 posto svih fizičkih trauma događa upravo u području glave i vrata (11,12). Osim toga, doktor dentalne medicine morao bi znati uočiti specifičnosti oralnog i dentalnog nalaza jer ponekad mogu biti prvi pokazatelji za postavljanje sumnje o zlostavljanju, što, naravno, ovisi o njegovoj educiranosti i spremnosti (13).

Naše zakonodavstvo propisuje obvezatno prijavljivanje suspektih slučajeva zlostavljanja i zanemarivanja. Prema Obiteljskom zakonu svatko je dužan obavijestiti Centar za socijalnu skrb o kršenju djetetovih prava, a posebice o svim oblicima tjelesnog, duševnog ili spolnog nasilja, zanemarivanja ili nemarnog postupanja, zlostavljanja ili izrabljivanja. Zatim, prema Zakonu o zaštiti od nasilja u obitelji, zdravstveno osoblje, djelatnik socijalne skrbi, psiholog, socijalni radnik, socijalni pedagog i djelatnik odgojno-obrazovne ustanove dužni su policiji ili mjerodavnom općinskom državnom odvjetništvu prijaviti nasilje u obitelji za koje su doznali tijekom obavljanja dužnosti. Ako stručnjak ima neke spoznaje o mogućem zlostavljanju djeteta, a nije obavijestio mjerodavne institucije, može kazneno odgovarati i snositi strukovne sankcije.

Oblici zlostavljanja

Zlostavljanje se najčešće opisuje u četiri kategorije: kao zanemarivanje, emocionalno zlostavljanje, fizičko zlostavljanje i seksualno zlostavljanje.

1. Zanemarivanje

Zanemarivanje je, prema američkim istraživanjima najčešći oblik zlostavljanja djece i obuhvaća čak 60 posto slučajeva zlostavljanja, a istodobno je i najčešći uzrok smrtnosti među zlostavljanom djecom (14,15). Medicinsko zanemarivanje, kao podvrsta zanemarivanja, znači odgodu ili odbijanje medicinske skrbi na štetu zdravstvenog stanja djeteta (16-18).

Dentalno zanemarivanje

Dentalno zanemarivanje smatra se podvrstom medicinskog zanemarivanja. Prema definiciji Američke akademije za dječju stomatologiju (American Academy of Paediatric Dentistry), to je namjerno izbjegavanje i/ili odbijanje provođenja dentalnomedicinskog liječenja nužnoga kako bi se poboljšalo oralno zdravlje u smislu zadovoljavajuće žvačne funkcije i stanja bez bolova i upale (19). Naime, gotovo svaki stomatološki problem, poput neliječenog karijesa, neliječene parodontne bolesti i ostalih oralnih bolesti, mogu uzrokovati

continuous education of professionals involved in providing medical services is stressed (5-9).

Pediatric and preventive dentistry represents a specialist field that provides dental treatment and state-of-the-art preventive, diagnostic and therapeutical procedures that sustain oral health of toddlers, children, and adolescents (10). It is possible that the doctor of dental medicine during examination or treatment discovers trauma of the head, face, neck and hands; the research shows that 50-75.5% of all physical trauma occurs in the area of the head and neck (11,12). Doctor of dental medicine should be able to recognize the specificities of oral and dental status, since it could represent the first indications for abuse; this, however, depends on the education level and readiness (13).

The Croatian legislature foresees obligatory report of all suspect cases of abuse and neglect. According to the Family Law everyone is obliged to inform the Center for social care about the abuse of children's rights, especially about any type of physical, psychological or sexual violence, neglect or irresponsible behavior, abuse or exploitation. Additionally, according to the Law on protection from domestic violence, medical professionals, welfare officers, psychologists, social workers, as well as teachers are required to report domestic violence about which they found out during working hours by contacting the police or local district attorney's office. If any professional has some knowledge about possible child abuse, and has not informed the authorities, that person can be held legally responsible and suffer professional sanctions.

Types of abuse

Abuse is usually divided in four categories: neglect, emotional abuse, physical abuse and sexual abuse.

1. Neglect

According to the US research, neglect is the most frequent type of child abuse, amounting to 60% of all abuse cases. At the same time it is the most frequent cause of death among abused children (14,15). Medical neglect, a subtype, is related to delaying or refusing to provide medical care that influences the health of a child (16-18).

Dental neglect

Dental neglect is considered to be a special subgroup of medical neglect. According to the definition of the American Academy of Pediatric Dentistry it is intentional avoidance and/or refusal of dental treatment needed in order to achieve or sustain oral health in relation to acceptable chewing function and painless and inflammation-free conditions (19). Almost every dental problem, such as untreated caries, periodontal disease and other oral diseases, can cause pain, inflammation spreading, sleep disturbance, food intake im-

bolove, širenje upale, poremećaj sna, otežano hranjenje, izostanak iz škole, potrebu za antibiotikom, ponovljenu potrebu za ekstrakcijama i teške infekcije koje mogu završiti rizičnim stanjima opasnim za život (20,21). Prepoznamo li dentalno zanemarivanje, treba imati na umu i kako ono utječe na opće zdravstveno stanje te procijeniti koliko je dijete općenito zanemareno (22). Tri su glavne skupine pokazatelja koje članovima dentalnomedicinskog tima mogu pomoći prepoznati dentalno zanemarivanje djece (2):

1. neliječeni, rampantni karijes;
2. neliječena bol, infekcija, krvarenje ili trauma u sklopu orofacijalnog područja;
3. odgođeno traženje dentalnomedicinske specijalističke pomoći nakon razjašnjene dijagnoze.

Dakle, ako su dijagnoza i njezine posljedice jasno identificirane, ako se postupak liječenja objasni i ako se uklone eventualne zapreke za obavljanje skrbi (najčešće socijalno-ekonomski i obrazovni čimbenici), neprihvaćanje liječenja smatra se dentalnim zanemarivanjem (23,24). Najčešći pokazatelj je neliječen rani karijes (25). Uz zlostavljanje djece on se smatra najvećim javno-zdravstvenim problemom koji pogađa malu djecu u svim kulturnim, etničkim i socijalno-ekonomskim skupinama, sa svim medicinskim, moralnim, kulturalnim i psihološkim implikacijama (26). Prema definiciji Američke akademije za dječju stomatologiju (American Academy of Paediatric Dentistry – AAPD-a), rani dječji karijes (*early childhood caries*) je prisutnost jednog ili više karioznih zuba (bilo da je riječ o nekavitiranim ili kavitiranim lezijama), izvađenih zuba (zbog karijesa) ili zuba s ispunima do dobi djeteta od 71. mjeseca (27). Epidemiologija ranog dječjeg karijesa u stranim istraživanjima pokazuje široku prevalenciju u rasponu od 11 do 72 posto (28). Etiološkim čimbenicima smatraju se kariogeni mikroorganizmi, slina, prehrambene navike, supstrat te obiteljske i socijalno-ekonomske okolnosti. Inicijalna kolonizacija mutans-streptokoka (MS-a) događa se tijekom prve godine djetetova života, što predstavlja i razdoblje kada izrastaju prvi mliječni zubi (29). Primaran način prijenosa MS-a je vertikalnom transmisijom preko njihovih majki (majčinom slinom), što potvrđuju i genotipovi MS-a izolirani kod djece (30). No, postoji i horizontalna transmisija jer su MS-ovi izolirani kod djece u vrtićima genotipizacijom pokazali identične genotipove (31). Osim navedenih, postoje i prehrambeni čimbenici koji su znatno povezani s ranim dječjim karijesom, osobito ako se neadekvatno održava oralna higijena. Oni podrazumijevaju dnevni unos šećera, noćne obroke, visoku frekvenciju ispijanja slatkih napitaka te velik broj obroka tijekom dana. Primarno saharoza, ali i fruktoza te glukoza, zatim i drugi fermentirani ugljikohidrati, imaju veliku ulogu u razvoju ranog dječjeg karijesa (32-35). Sljedeći čimbenik koji može utjecati na rani dječji karijes jest izlučivanje i sastav sline jer ona, ako je ima dovoljno, svojim puferskim kapacitetom djeluje kao zaštitni čimbenik od karijesa, a ako je izlučivanje smanjeno (tijekom noći) može povećati rizik za nastanak kariozne lezije (36,37). U nekim istraživanjima, što se može objasniti višestrukim etiologijom, potvrđena je velika ovisnost između noćnog hranjenja bočicom i ranoga dječjeg karijesa (32,38-41), a u nekim ne (42,43). Promatramo li doje-

pairment, non-attendance at school, antibiotic treatment, repeated need for extractions and severe infections that can lead to life-threatening conditions (20,21). If dental neglect is recognized, one must bear in mind that it influences the general health condition and needs to assess the overall neglect (22). There are three groups of indicators that can help dental professionals in the recognition of dental neglect (2):

1. untreated, rampant caries
2. untreated pain, infection, bleeding or trauma in the orofacial region
3. delayed seeking of dental help after clear diagnosis.

If the diagnosis is certain, and its consequences clearly identified, if the treatment is described in detail and all the obstacles for delivery are removed (usually socio-economic and educational factors), non-acceptance of treatment should be considered as neglect (23,24). The most frequent indicator is early caries (25). In combination with abuse, it is considered to be the greatest public health problem that affects small children in all cultural, ethnical and socio-economic groups with all the medicinal, moral, cultural and psychological implications (26). According to the definition of the American Academy of Pediatric Dentistry (AAPD), early childhood caries is presence of one or more teeth with carious lesions (either non-cavitated or cavitated lesions), extracted teeth (due to caries) or filled teeth up to the age of 71 months (27). The epidemiology of early childhood caries shows a wide prevalence range from 11 to 72% (28). Etiological factors considered are cariogenic microorganisms, saliva, nutritional habits, substrate and family and socio-economic circumstances. The initial colonization of the mutans Streptococci (MS) occurs during the first year of life, which is at the same time the period of deciduous teeth eruption (29). The primal way of contracting MS is vertical transmission from the mothers (through their mothers' saliva); this is confirmed by MS genotypes isolated from children (30). Horizontal transmission also occurs, since MS genotypes isolated from kindergarten children showed identical genotypes (31). Nutritional factors contribute strongly to childhood caries, especially with unfavorable oral hygiene measures combined with high sugar intake, night snacks, high frequency of sweet beverages and high number of meals during the day. Primarily saccharose, but fructose and glucose as well as other fermented carbohydrates, plays an important role in the development of early childhood caries (32-35). Next factor that can influence the development of early childhood caries is secretion and composition of saliva, since it, if present in abundance, can act as a protective agent against caries thanks to its buffer capacity. If there is not enough saliva (during the night), the risk for caries development can increase (36,37). Some studies confirm (32,38-41), and some deny (42,43) the high dependence of night feeding by bottle and early childhood caries; this can be explained by multifactorial etiology. If we consider breastfeeding, the results are different; some authors claim that prolonged breastfeeding (longer than 12 months) during the night can increase the risk for caries development, while others claim there is no correlation between breastfeeding and early childhood caries (32,44-46). Another factor that can

nje, rezultati istraživanja su različiti, pa jedni govore u prilog tome da produljeno dojenje (više od 12 mjeseci) noću može povećati rizik od nastanka karijesa, a drugi da između dojenja i ranog dječjeg karijesa nema povezanosti (32,44-46). Još jedan čimbenik koji može pridonijeti razvoju karijesa jest poremećeno obiteljsko okruženje (jedan roditelj ili razdvojeni roditelji), ali i oralno-higijenske navike roditelja (47,48).

Klinička slika ranog dječjeg karijesa karakteristična je i na početku se pojavljuje u obliku bijelih demineraliziranih mrlja na vanjskoj plohi zuba uz gingivu, a kasnije može prerasti u diskolorirane kavitete (49). Promjene se mogu pojaviti već nakon nicanja zuba, najprije zahvaćajući mliječne gornje prednje zube, no u toj prvoj fazi roditelji ih najčešće ne prepoznaju. Ako je oštećenje zuba dovoljno veliko da dijete izgubi frontalne zube u dobi od dvije do tri godine, to je najkritičnije razdoblje jer se tada razvija govor. Takav uznapredovali rani dječji karijes ima reperkusije i na fizički razvoj, pa često dolazi do gubitka na težini, zaostajanja u visini zbog otežane prehrane, a smanjena je i želja za hranom zbog bolova (26). Konačna posljedica ranog dječjeg karijesa može biti prerani gubitak mliječnih zuba zbog vađenja onih koji se više ne mogu izliječiti konzervativnim metodama. Često kod djece s ranim karijesom postoji povećani rizik od nastanka karijesa i u trajnoj denticiji (50). Osim neliječenog rampantnog karijesa, kao glavnog indikatora dentalnog zanemarivanja, bilo koja druga neliječena bol, infekcija, krvarenje ili trauma u orofacijalnom području mogu također upućivati na dentalno zanemarivanje. Kako je oralna higijena kod zanemarene djece najčešće na vrlo niskoj razini, često je, osim opsežnih karioznih lezija, vidljiva i upala mekih tkiva usne šupljine, gingive i parodonta. Zato je važno u rutinski kontrolni pregled uključiti ne samo određivanje statusa zuba, nego i potpornih struktura. Djeca mogu imati bilo koju vrstu parodontalne bolesti prema kliničkoj klasifikaciji bolesti Američke akademije za parodontologiju (51), i to:

- 1.) upalu gingive nastalu zbog plaka;
- 2.) kronični parodontitis;
- 3.) agresivni parodontitis;
- 4.) parodontitis kao manifestaciju sistemske bolesti;
- 5.) nekrotizirajuću parodontalnu bolest.

No, najčešće imaju gingivitis kod kojega nije prisutan gubitak kosti (52,53), a za etiologiju i patogenezu smatra se odgovornim povećana subgingivalna razina bakterijskih vrsta poput *Actinomyces* sp., *Capnocytophaga* sp., *Leptotrichia* sp. i *Selenomonas* sp.. Prijede li gingivitis u kroničan oblik i potraje li dovoljno dugo, upala se može proširiti u ostale, okolne strukture. Iako postoji znatno manja prevalencija destruktivnih parodontnih bolesti kod djece negoli kod odraslih, kod djece se mogu razviti teži oblici parodontitisa. Naime, agresivni parodontitis, lokalizirani ili generalizirani, koji prati rapidan gubitak pričvrška i kosti, može biti znatno češći kod djece i adolescenata u odnosu prema odrasloj populaciji (51).

Prvi potez u obradi pacijenta s traumom u svakom je slučaju uzimanje dobre anamneze i heteroanamneze vezano za vrstu ozljede, način na koji je nastala i vrijeme nastanka. Razlike u anamnezi i heteroanamnezi te neslaganje s težinom kliničke slike pacijenta, vrlo je suspektno na zlostavljanje. Također,

contribute to caries development is disturbed family relations (single parent, separated/divorced parents), but so are parents' oral hygiene habits (47,48).

Clinical presentation of early childhood caries is specific, appearing as white demineralized spots on the outer surface of the tooth close to gingiva; later they can develop into discolored cavities (49). Changes can occur soon after tooth eruption, affecting upper deciduous teeth. The parents rarely notify these changes in the first phase. If the destruction is such that upper front teeth are destroyed by the age of 2 to 3 years, it can seriously affect the speech that is developing. Such advanced early childhood caries has serious repercussions on physical development in relation to weight loss, impaired growth due to problems in food uptake, as well as loss of appetite due to pain (26). Final consequence of early childhood caries can be the premature loss of deciduous teeth that can not be treated conservatively. Such children also very often have increased risk for caries in the permanent dentition (50). Apart from untreated rampant caries as the most important indicator of child neglect, any other untreated pain, infection, bleeding or trauma in the orofacial region can suggest dental neglect. Since oral hygiene in neglected children is poor they very often have, apart from carious lesions, inflammation of the mucosa, gingiva and periodontium. Therefore it is of utmost importance to perform the examination of dental status as well as the examination of the supporting structures. Children can be diagnosed with any of the periodontal diseases classified by the American Academy of Periodontology as (51):

- 1.) Plaque-related gingival inflammation
- 2.) Chronic periodontitis
- 3.) Aggressive periodontitis
- 4.) Periodontitis related to systemic diseases and conditions
- 5.) Necrotizing periodontal disease

Most of the children, however, have gingivitis that is not associated with bone loss (52,53). Its etiology and pathogenesis is considered to be associated with increased subgingival levels of bacterial species such as *Actinomyces* sp., *Capnocytophaga* sp., *Leptotrichia* sp. and *Selenomonas* sp. If gingivitis advances and becomes chronic, it can spread to nearby structures. Although children tend to have smaller prevalence of destructive periodontal disease when compared to adults, they can have more severe types of periodontal disease. Aggressive periodontitis, localized or generalized and characterized by rapid loss of attachment and bone, tends to be more frequent in children and adolescents than adult population (51).

First step in the examination of a trauma patient is history, taken from the child as well as from its parents/custodians, regarding the nature of the trauma, type of trauma and the time of trauma. Differences in the history and lack of consistency between the severity of the trauma and the story told by the parents/custodians may point to abuse. Also, delayed seeking of professional help or lack thereof regarding an earlier trauma can be an additional component for suspected neglect. It is of utmost importance that the picture of the interaction between the parent and the child is assessed on entry into the dental office, more so if the nature of the trauma

odgođeno traženje ili ne traženje pomoći za traumu koja se, prema našoj procjeni, dogodila ranije, može biti dodatni element za sumnju na zanemarivanje. Upotunjavanje naše slike o djetetu i roditelju, kada je riječ o njihovu uzajamnom ponašanju, ali i o komunikaciji s ostalim osobljem dentalnomedicinskog tima tijekom prvog dolaska u ordinaciju, iznimno je važno za procjenu o kakvoj se vrsti ozljede radi – namjernoj ili nenamjernoj. Nezaobilaznu ulogu u cjelokupnoj procjeni ima i sestra na prijmu u ordinaciju i dentalni higijeničar, a ne samo stomatolog kako bismo u prvi trenutak pomislili (2). Općenito, trauma na licu i u usnoj šupljini može imati velike negativne posljedice za djecu u smislu funkcije žvakanja, estetike i psihosocijalnog aspekta. Traume mliječnih zuba najčešće se događaju u dobi djeteta od dvije do tri godine, što je uobičajeno i razdoblje razvoja motoričke koordinacije (54). No, uočimo li ozljede na drugim, neprominentnim dijelovima tijela kod takvog malog pacijenta, a uz to imamo i višestruke traume mliječnih zuba, valja razmotriti mogućnost zlostavljanja. Nakon što se dogodi trauma mliječnog zuba, strategija liječenja ponajprije ovisi o procjeni posljedica koje bi se mogle dogoditi na trajnim zamecima (55,56). Kako je intruzijska trauma ujedno i najčešći oblik traume zuba u mliječnoj denticiji, procjena o čekanju spontane reerupcije, odnosno o vađenju mliječnog zuba iznimno je važna za procjenu stanja zametka trajnog zuba i mogućih kasnijih posljedica na njegov rast i razvoj. Naime, moguće su komplikacije vezane za vitalitet pulpe i promjenu boje krune traumatiziranog zuba, ali i komplikacije na trajnim nasljednicima poput caklinske hipoplazije, hipokalcifikacije, dilaceracije krune i/ili korijena ili promjene redosljeda nicanja trajnog zuba (57-59). Što je trauma nastala u ranijoj fazi rasta i razvoja zuba, to će posljedice biti jače izražene i to nam svakako pokazuje vrijeme nastanka traume. Trauma trajnih zuba najčešće nastaje kao posljedica slučajnih padova, sportskih treninga, automobilskih nesreća, ali i nasilja i to u dobi od sedme do devete godine (60). Tada su najčešće traumatizirani zubi gornji središnji sjekutići kod kojih još nije završena apeksogeneza, što dodatno može komplicirati tretman zuba. Određivanje strategije liječenja trajnih zuba najčešće ovisi o vitalitetu pulpe i parodontnog ligamenta (60,61).

2. Emocionalno zlostavljanje

Emocionalno zlostavljanje trajno je loše emocionalno postupanje s djetetom u mjeri koja izaziva teške i trajne negativne učinke na emocionalni razvoj. Takvo zlostavljanje često prate drugi oblici nasilja i može ga se predvidjeti ako dijete izgleda zbrinuto i uhranjeno. Glavni trag koji liječnika dentalne medicine može potaknuti na sumnju o emocionalnom zlostavljanju može biti odnos djeteta i roditelja. Emocionalno zlostavljana djeca često kasne s intelektualnim i socijalnim razvojem, zaostaju u razvoju, u školi su neuspješna, nemaju socijalnu odgovornost, mogu biti agresivna, mogu imati poremećaje vezivanja, nekritično su prijateljski raspoložena, problematično se ponašaju i imaju teškoće s pozornošću (2,16).

3. Fizičko zlostavljanje

Najčešće fizičko zlostavljanje je udaranje, trešnja, bacanje, trovanje, opekline, utapanje, gušenje i slično. Zabrinutost uvijek potiču ozljede mekih tkiva, ozljede s određenim

is to be established – voluntary or accidental. Important roles are also played by a dental hygienist and a receptionist, not only the dentist (2). Generally, facial or oral trauma can have great negative consequences for the child regarding the chewing, esthetics and psychosocial aspects. Trauma of deciduous teeth is usually occurring in age 2-3, the age of coordination (54). But if we discover trauma on other, non-prominent parts of the body of such small children, occurring at the same time with multiple trauma of deciduous teeth, we should consider the possibility of abuse. Trauma of deciduous teeth is treated according to the consequence assessment that could affect permanent dentition (55,56). Since intrusion trauma is usually the most often type in deciduous dentition, the assessment of subsequent spontaneous re-eruption or extraction is essential for the assessment of the condition of the developing permanent tooth, and subsequent consequences on its growth and development. Possible complications are related to the vitality of the pulp and changes of the crown of the traumatized tooth, as well as complications on permanent teeth such as enamel hypoplasia, hypocalcification, dilacerations of the crown and/or root, or changes in the eruption sequence (57-59). The earlier the trauma, the stronger are the consequences – thereby showing the time of trauma occurrence. Trauma of permanent teeth is usually a consequence of sudden falls, sport training, car accidents, but also abuse in the age 7 to 9 (60). The most traumatized teeth in that age are upper central incisors that are still in the process of apexogenesis, the fact that can further complicate the treatment. Determination of treatment strategy of permanent teeth usually depends on tooth and periodontal ligament vitality (60,61).

2. Emotional abuse

Emotional abuse is continuous poor emotional relation to a child that leaves deep and permanent effects on emotional development. Such abuse is often entwined with other types of abuse and can be overseen if a child appears taken care of and fed. The main lead that can incite dentists to suspected emotional abuse is the relationship between the child and its parent. Emotionally abused children are usually slow in intellectual and social development, troublesome in school, lack social responsibility, may be aggressive, have trouble in bonding, uncritically hostile, behave oddly and have attention problems (2,16).

3. Physical abuse

The most frequent types of physical abuse are hitting, shaking, throwing, burns, drowning, choking, and similar. Concern is always aroused by soft tissue trauma, trauma with

uzorkom, zatim svaka ozljeda koja ne odgovara anamnezi, obostrane ozljede, ozljede u „sigurnom trokutu“ i ostalo. Nenamjerne ozljede u pravilu uključuju koštana izbočenja, odgovaraju anamnezi i u skladu su s djetetovom razvojnom fazom. Ozljede zlostavljanja na glavi i licu manifestiraju se najčešće kao modrice, abrazije i laceracije, opekline, ugrizi, ozljede oka i prijelomi kostiju. Modrice na mekom tkivu obraza, modrice kod dojenčadi koja se ne kreće samostalno i višestruke modrice u skupinama ili one sličnog oblika, upućuju na zlostavljanje. Modrice ili posjekline na vratu i uhu rijetke su i može ih se smatrati namjernim ozljedama. Abrazije i laceracije na licu zlostavljane djece mogu biti izazvane mnogim predmetima, no najčešće je to prstenje ili nokti na ruci osobe koja je nanijela ozljedu. Opekline obuhvaćaju oko deset posto slučajeva fizičkog zlostavljanja i mogu biti nanese vrućim ili kaustičnim tekućinama, ili vrućim krutim sredstvima koja tada odražavaju oblik predmeta s kojim se zlostavljanje činilo. Ugrize mogu izazvati druga djeca ili odrasli tijekom napada ili su oblik kažnjavanja. Tragovi ugriza koji su nastali tijekom seksualnog odnosa češći su kod adolescenata. Ljudski ugriz prepoznaje se prema obliku i veličini, a trajanje tragova ovisno je o primijenjenoj sili i opsegu oštećenja tkiva. Otisci zuba koji nisu probili kožu mogu nestati za 24 sata – u svakom slučaju tragovi na tanjim tkivima dulje se zadržavaju. Otisak ugriza predstavlja jedinstvenu mogućnost za identifikaciju zlostavljača. Ozljede oka kod djece su neuobičajene, i ako su obostrane, treba posumnjati na zlostavljanje. Prijelomi mogu nastati na svim kostima, a većina se javlja u dobi do treće godine. Fizički trajno zlostavljano dijete može imati višestruke prijelome u različitim stadijima cijeljenja. Intraoralni znakovi mogu biti rascijepljen labijalni frenulum zbog forsiranog hranjenja, petehije i ožiljci na usnama, laceracija jezika i usana, frakture gornje i donje čeljusti, frakture ili avulzije zuba i multiple frakture korijena ili neobične malokluzije izazvane traumom, diskolorirani zubi kao posljedica gubitka vitaliteta zuba nakon traume i opekline mekih tkiva usne šupljine zbog djelovanja kaustičnih sredstava (62,63). Prema istraživanju Naidooa (64), zlostavljanjem su najčešće zahvaćene oralne strukture usne šupljine (54%), a zatim oralna mukoza, zubi, gingiva i jezik.

4. Seksualno zlostavljanje

Seksualno zlostavljanje znači zavođenje ili prisiljavanje djeteta ili mlade osobe da sudjeluje u seksualnim aktivnostima, uključujući prostituciju, bilo da je dijete svjesno toga što se događa ili ne. Te aktivnosti mogu biti s tjelesnim kontaktom (penetracijske i nepenetracijske aktivnosti), te bez kontakta, poput poticanja djece da se ponašaju na seksualno neprikladan način ili da gledaju seksualne aktivnosti. Na seksualno zlostavljanje doktor dentalne medicine može posumnjati nađe li u usnoj šupljini petehijalno krvarenje na nepcu, što je posljedica forsiranog oralnog seksa, zatim oralni sifilis i kliničke manifestacije ostalih spolno prenosivih bolesti (2).

Zaključak

Poznato je da mnoge slučajeve zlostavljanja i zanemarivanja djece stručnjaci ne prepoznaju ili ne prijavljuju zbog različitih razloga, pa takva djeca kontinuirano trpe. Rani dječji

certain pattern, every trauma that does not fit to the history, trauma on both sides, trauma in the “safe triangle”, etc. Unintentional wounds include bone exostoses, comply with the history and are in concordance with the developmental phase. Abuse wounds on the head and face include black marks, abrasions, lacerations, burns, bites, eye trauma and bone fractures. Black marks on the buccal soft tissue, black marks in children that cannot move by themselves, as well as black marks in groups or similar shape, suggest abuse. Abrasions and lacerations on the neck and ear are rare and can be considered intentional trauma. They can be caused by a number of objects such as rings or fingernails on the hand of the abuser. Burns present around 10% of the abuse cases and can be caused by hot or caustic liquids or hot hard objects so that the trauma resembles the shape of the object. Bites can be caused by other children or adults during attack, or can be a type of punishment. Bite marks occurring during sexual intercourse are more frequent in adolescents. Human bite mark is recognized by the size and shape, and its duration depends on the force and tissue damage inflicted. Teeth marks that have not penetrated the skin can disappear in 24 hours – they remain visible longer on thinner tissues. Bite mark represents the ideal possibility for the identification of the attacker. Eye trauma is unusual in children; if they are on both sides, one should consider abuse. Fractures can occur in all bones, usually more often until the age of 3. Physically abused child can have multiple fractures in different stages of healing. Intraoral signs can include forked frenum (due to forced feeding), petechiae and scars on lips, lip/tongue lacerations, jaw fractures (upper or lower), fractures and avulsions of teeth, multiple root fractures, unusual malocclusions caused by trauma, discolored teeth that have lost their vitality due to trauma, intraoral burns caused by caustic agents (62,63). According to Naidoo et al. (64) abuse is most frequently located on the oral structures such as lips (54%), followed by oral mucosa, teeth, gingiva and tongue.

4. Sexual abuse

Sexual abuse considers seduction or forced sexual intercourse with a child or young person and includes prostitution (whether the child is aware or not). The activities can have physical contact (penetration/non-penetration), or be without the contact, such as enticing children to act in a sexually inappropriate way, or to observe sexual activities. Sexual abuse can be suspected when a dentist finds petechial bleeding on the palate that is the consequence of forced oral sex, oral syphilis and clinical manifestations of other sexually transmitted diseases (2).

Conclusion

It is well known that many cases of abuse and neglect are not recognized by the professionals due to numerous reasons. Such children are in constant suffering. Early childhood car-

karijes, kao najčešći potencijalni pokazatelj dentalnog zanemarivanja, stomatolozi bi morali uočiti, osobito zbog višestrukih i dugotrajnih posljedica na oralno i opće zdravlje. Osim toga, često ponavljanje traume zuba, na istim ili različitim zubima, te prisutnost kasnih posljedica neliječenih trauma vrlo su indikativni za dentalno zanemarivanje i zlostavljanje. Zadaća specijalista dječje stomatologije, ali i cijeloga dentalnomedicinskog tima, nezaobilazan je element uspješnog multidisciplinarnog pristupa djeci koju valja zaštititi od zlostavljanja.

ies, the most frequent sign of dental neglect, should be noted by the dentists, especially due to its multiple and long-term effects on oral and general health. Frequent traumas to the same or other teeth, appearance of late consequences of untreated trauma are very indicative for dental neglect and abuse. It is the task of the specialists of pediatric and preventive dentistry, but of the whole dental team as well, to approach such children in a multidisciplinary manner in order to protect children from abuse.

Abstract

Early recognition of abused children is an important task with legal obligation for all medical professionals that deal with children. Abuse encompasses a number of categories: neglect, emotional, physical and sexual abuse. The most frequent type of abuse is neglect. The dental literature includes the term dental neglect, a subgroup of medical neglect. It is often manifested by early childhood caries (which has long-term effects on general health and is frequently an outstanding symptom of a generally neglected child), untreated pain, inflammation, bleeding or trauma of the orofacial area, as well as delayed seeking of professional dental help. Adequate knowledge is required from all members of the dental team regarding different types of abuse; it is a necessary prerequisite for the discovery of abuse and delivering aid to the abused child in the dental practice.

Received: November 18, 2010

Accepted: December 2, 2010

Address for correspondence

Prof. dr. sc. Ivana Čuković-Bagić
Department of Pediatric and Preventive Dentistry
School of Dental Medicine
University of Zagreb
Gundulićeva 5
HR-10000 Zagreb, Croatia
Tel: +38514802110
bagic@sfzg.hr

Key words

Children Abuse; Ethic, Dental; Children; Professional-Patient Relations

References

1. United Nations, Office of the High Commissioner for Human Rights [homepage on the Internet]. Geneva, Switzerland: Office of the High Commissioner for Human Rights; 1989. Convention on the rights of the child; [about 15 pages]. Available from: <http://www2.ohchr.org/english/law/crc.htm>.
2. Harris J, Sidebotham P, Welbury R. Zaštita djeteta i stomatološki tim : uvod u provedbu zaštite djece u stomatološkoj praksi. [Child protection and the dental team: an introduction to safeguarding children in dental practice]. [monograph on the Internet]. Zagreb: Stomatološki fakultet; 2009. Available from: http://www.cpd.org.uk/f_info/dload/CPDT_Croatian%2004_2010.pdf.
3. Nuzzolese E, Lepore MM, Cukovic-Bagic I, Montagna F, Di Vella G. Forensic sciences and forensic odontology: issues for dental hygienists and therapists. *Int Dent J*. 2008 Dec;58(6):342-8.
4. Nuzzolese E, Lepore M, Montagna F, Marcario V, De Rosa S, Solarino B et al. Child abuse and dental neglect: the dental team's role in identification and prevention. *Int J Dent Hyg*. 2009 May;7(2):96-101.
5. Lazenbatt A, Freeman R. Recognizing and reporting child physical abuse: a survey of primary healthcare professionals. *J Adv Nurs*. 2006 Nov;56(3):227-36.
6. Bankole OO, Denloye OO, Adeyemi AT. Child abuse and dentistry: a study of knowledge and attitudes among Nigerian dentists. *Afr J Med Sci*. 2008 Jun;37(2):125-34.
7. Manea S, Favero GA, Stellini E, Romoli L, Mazzucato M, Facchin P. Dentists' perceptions, attitudes, knowledge, and experience about child abuse and neglect in northeast Italy. *J Clin Pediatr Dent*. 2007 Fall;32(1):19-25.
8. Thomas JE, Straffon L, Inglehart MR. Knowledge and professional experiences concerning child abuse: an analysis of provider and student responses. *Pediatr Dent*. 2006 Sep-Oct;28(5):438-44.
9. Harris JC, Elcock C, Sidebotham PD, Welbury RR. Safeguarding children in dentistry: 2. Do paediatric dentists neglect child dental neglect? *Br Dent J*. 2009 May 9;206(9):465-70.
10. American Academy on Pediatric Dentistry Council on Clinical Affairs. Policy on the role of pediatric dentists as both primary and specialty care providers. *Pediatr Dent*. 2008-2009;30(7 Suppl):79.
11. Kenney JP. Domestic violence: a complex health care issue for dentistry today. *Forensic Sci Int*. 2006 May 15;159 Suppl 1:S121-5.
12. Cairns AM, Mok JY, Welbury RR. Injuries to the head, face, mouth and neck in physically abused children in a community setting. *Int J Paediatr Dent*. 2005 Sep;15(5):310-8.
13. Montecchi PP, Di Trani M, Sarzi Amadè D, Bufacchi C, Montecchi F, Polimeni A. The dentist's role in recognizing childhood abuses: study on the dental health of children victims of abuse and witnesses to violence. *Eur J Paediatr Dent*. 2009 Dec;10(4):185-7.
14. Child Welfare Information Gateway. Prevalence [monograph on the Internet]. Washington, DC: Children's Bureau, Administration for Children and Families, U.S. Department of Health and Human Services; [cited February 15, 2010]. Available from: <http://www.childwelfare.gov/can/prevalence>.
15. US Department of Health and Human Services, Administration on Children Youth and Families. Child Maltreatment 2007 [homepage on the Internet]. Washington DC: US Government Printing Office; 2009. Available from: http://www.acf.hhs.gov/programs/cb/stats_research/index.htm#can.
16. Buljan Flander G, Kocijan Hercigonja D. Child abuse and neglect. Zagreb: Marko M; 2003.
17. Čorić V, Buljan-Flander G. Child neglect – risk factors, consequences, role of physician and possibilities for prevention. *Pediatr Croat*. 2008;52(1):29-33.
18. Dubowitz H, Bennett S. Physical abuse and neglect of children. *Lancet*. 2007 Jun 2;369(9576):1891-9.
19. American Academy of Paediatric Dentistry [homepage on the Internet]. Chicago: American Academy of Paediatric Dentistry; 2010. Definition of Dental Neglect, 2006 [about 1 page]; Available from: http://www.aapd.org/media/Policies_Guidelines/D_DentalNeglect.pdf
20. Harris JC, Sidebotham PD, Welbury RR. Safeguarding children in dental practice. *Dent Update*. 2007 Oct;34(8):508-10, 513-4, 517.
21. Jessee SA. The neglect of our youth: a dental perspective. *ASDC J Dent Child*. 1993 Nov-Dec;60(4):361-4.
22. McGrath C, Sham AS, Ho DK, Wong JH. The impact of dental neglect on oral health: a population based study in Hong Kong. *Int Dent J*. 2007 Feb;57(1):3-8.

23. American Academy of Pediatrics Committee on Child Abuse and Neglect; American Academy of Pediatric Dentistry; American Academy of Pediatric Dentistry Council on Clinical Affairs. Guideline on oral and dental aspects of child abuse and neglect. *Pediatr Dent.* 2008-2009;30(7 Suppl):86-9.
24. Jessee SA. Risk factors as determinants of dental neglect in children. *ASDC J Dent Child.* 1998 Jan-Feb;65(1):17-20.
25. Valencia-Rojas N, Lawrence HP, Goodman D. Prevalence of early childhood caries in a population of children with history of maltreatment. *J Public Health Dent.* 2008 Spring;68(2):94-101.
26. American Academy on Pediatric Dentistry; American Academy of Pediatrics. Policy on early childhood caries (ECC): classifications, consequences, and preventive strategies. *Pediatr Dent.* 2008-2009;30(7 Suppl):40-3.
27. American Academy of Pediatric Dentistry. Policy on definition of early childhood caries (ECC); 2008.
28. Vadiakas G. Case definition, aetiology and risk assessment of early childhood caries (ECC): a revisited review. *Eur Arch Paediatr Dent.* 2008 Sep;9(3):114-25.
29. Karn TA, O'Sullivan DM, Tinanoff N. Colonization of mutans streptococci in 8- to 15-month-old children. *J Public Health Dent.* 1998 Summer;58(3):248-9.
30. Mitchell SC, Ruby JD, Moser S, Momeni S, Smith A, Osgood R et al. Maternal transmission of mutans Streptococci in severe-early childhood caries. *Pediatr Dent.* 2009 May-Jun;31(3):193-201.
31. Mattos-Graner RO, Li Y, Caufield PW, Duncan M, Smith DJ. Genotypic diversity of mutans streptococci in Brazilian nursery children suggests horizontal transmission. *J Clin Microbiol.* 2001 Jun;39(6):2313-6.
32. Ye W, Feng XP, Liu YL. Epidemiological study of the risk factors of rampant caries in Shanghai children. *Chin J Dent Res.* 1999 May;2(2):58-62.
33. Paunio P, Rautava P, Helenius H, Alanen P, Sillanpää M. The Finnish family competence study: the relationship between caries, dental health habits and general health in 3-year-old Finnish children. *Caries Res.* 1993;27(2):154-60.
34. Stecksén-Blicks C, Holm AK. Between-meal eating, toothbrushing frequency and dental caries in 4-year-old children in the north of Sweden. *Int J Paediatr Dent.* 1995 Jun;5(2):67-72.
35. Tinanoff N, Palmer CA. Dietary determinants of dental caries and dietary recommendations for preschool children. *J Public Health Dent.* 2000 Summer;60(3):197-206; discussion 207-9.
36. Tenovou J, Lumikeri M. Organic factors in human saliva in relation to dental caries. In: Johnson NW, editor. *Risk markers for oral diseases. Vol 1. Dental caries.* Cambridge: Cambridge University Press; 1991. p. 382-98.
37. Seow WK. Biological mechanisms of early childhood caries. *Community Dent Oral Epidemiol.* 1998;26(1 Suppl):8-27.
38. al Ghanim NA, Adenubi JO, Wyne AA, Khan NB. Caries prediction model in pre-school children in Riyadh, Saudi Arabia. *Int J Paediatr Dent.* 1998 Jun;8(2):115-22.
39. Schwartz SS, Rosivack RG, Michelotti P. A child's sleeping habit as a cause of nursing caries. *ASDC J Dent Child.* 1993 Jan-Feb;60(1):22-5.
40. Johnsen DC. Characteristics and backgrounds of children with "nursing caries". *Pediatr Dent.* 1982 Sep;4(3):218-24.
41. Hallett KB, O'Rourke PK. Early childhood caries and infant feeding practice. *Community Dent Health.* 2002 Dec;19(4):237-42.
42. Milgrom P, Riedy CA, Weinstein P, Tanner AC, Manibusan L, Bruss J. Dental caries and its relationship to bacterial infection, hypoplasia, diet, and oral hygiene in 6- to 36-month-old children. *Community Dent Oral Epidemiol.* 2000 Aug;28(4):295-306.
43. Oulis CJ, Berdouses ED, Vadiakas G, Lygidakis NA. Feeding practices of Greek children with and without nursing caries. *Pediatr Dent.* 1999 Nov-Dec;21(7):409-16.
44. Al-Malik MI, Holt RD, Bedi R. Prevalence and patterns of caries, rampant caries, and oral health in two- to five-year-old children in Saudi Arabia. *J Dent Child (Chic).* 2003 Sep-Dec;70(3):235-42.
45. Iida H, Auinger P, Billings RJ, Weitzman M. Association between infant breastfeeding and early childhood caries in the United States. *Pediatrics.* 2007 Oct;120(4):e944-52.
46. Dye BA, Shenkin JD, Ogden CL, Marshall TA, Levy SM, Kanellis MJ. The relationship between healthful eating practices and dental caries in children aged 2-5 years in the United States, 1988-1994. *J Am Dent Assoc.* 2004 Jan;135(1):55-66.
47. Hallett KB, O'Rourke PK. Social and behavioural determinants of early childhood caries. *Aust Dent J.* 2003 Mar;48(1):27-33.
48. Vargas CM, Crall JJ, Schneider DA. Sociodemographic distribution of pediatric dental caries: NHANES III, 1988-1994. *J Am Dent Assoc.* 1998 Sep;129(9):1229-38.
49. Twetman S. Prevention of early childhood caries (ECC)--review of literature published 1998-2007. *Eur Arch Paediatr Dent.* 2008 Mar;9(1):12-8.
50. Vanobbergen J, Martens L, Lesaffre E, Bogaerts K, Declerck D. The value of a baseline caries risk assessment model in the primary dentition for the prediction of caries incidence in the permanent dentition. *Caries Res.* 2001 Nov-Dec;35(6):442-50.
51. Armitage GC. Development of a classification system for periodontal diseases and conditions. *Ann Periodontol.* 1999 Dec;4(1):1-6.
52. Pilot T, Barmes DE, Leclercq MH, McCombie BJ, Sardo Infirri J. Periodontal conditions in adolescents, 15-19 years of age: an overview of CPITN data in the WHO Global Oral Data Bank. *Community Dent Oral Epidemiol.* 1987 Dec;15(6):336-8.
53. Arnlaugsson S, Magnusson TE. Prevalence of gingivitis in 6-year-olds in Reykjavik, Iceland. *Acta Odontol Scand.* 1996 Aug;54(4):247-50.
54. Flores MT. Traumatic injuries in the primary dentition. *Dent Traumatol.* 2002 Dec;18(6):287-98.
55. Andreasen JO, Andreasen FM. *Essentials of traumatic injuries to the teeth.* Copenhagen: Munksgaard and Mosby; 2000. p. 9-154.
56. Holan G, McTigue D. Introduction to dental trauma: Managing traumatic injuries in the primary dentition. In: Pinkham JR, Casamassimo PS, Fields HWJr, McTigue DJ, Nowak A, editors. *Pediatric dentistry. Infancy through adolescence.* St. Louis, Mo: Elsevier Saunders; 2005. p. 236-56.
57. Borum MK, Andreasen JO. Sequelae of trauma to primary maxillary incisors. I. Complications in the primary dentition. *Endod Dent Traumatol.* 1998 Feb;14(1):31-44.
58. American Academy of Pediatric Dentistry. *Pediatric Dental Trauma Card – Primary Teeth, Permanent Teeth.* Chicago: American Academy of Pediatric Dentistry; 2002.
59. Lulić-Dukić O, Radionov D, Buković D, Verzak Ž, Bagić I. Trauma of deciduous teeth and the most common consequences. *Paediatr Croat.* 1998;42(3-4):153-7.
60. Andreasen JO, Andreasen FM. *Textbook and color atlas of traumatic injuries to the teeth.* Copenhagen: Munksgaard; 2007. p. 897.
61. McTigue DJ. Managing traumatic injuries in the young permanent dentition. In: Pinkham JR, Casamassimo PS, Fields HWJr, McTigue DJ, Nowak A, editors. *Pediatric dentistry. Infancy through adolescence.* St. Louis, Mo: Elsevier Saunders; 2005. p. 593-607.
62. Kvaal SI. Oral injuries in cases of child abuse. *Rev Belge Med Dent.* 1993;48(1):49-53.
63. da Fonseca MA, Feigal RJ, ten Bonsel RW. Dental aspects of 1248 cases of child maltreatment on file at a major county hospital. *Pediatr Dent.* 1992 May-Jun;14(3):152-7.
64. Naidoo S. A profile of the oro-facial injuries in child physical abuse at a children's hospital. *Child Abuse Negl.* 2000 Apr;24(4):521-34.