

An Overview on Common Problems of Dentistry in Children

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Abstract

Many factors contribute to the abnormality in the child's dentition. Dental caries, pulpal and periapical lesions, dental trauma, abnormality in tooth development, and oral habits are the most common problems in children that are associated with childhood dental problems. Management of oral health in the early childhood stage is essential to minimize the unwanted effect of these diseases on the dentition. Therefore, preserving the primary teeth is very important to prevent these conditions to achieve successful oral health for children and adolescents, even for their adult stage.

Keywords: *Dentistry; Children; Dental Caries*

Introduction

In childhood, one of the main goals of dental visits that begin with the development of the first teeth is to examine the common problems and abnormalities of children. As we have emphasized repeatedly, the published articles also emphasize the importance of preserving the primary teeth. As a result, it should be noted that the diagnosis and treatment of these problems include those that are specialized in the domain of pediatric dentistry and orthodontics.

Unfortunately, many of these abnormalities and dental problems are misdiagnosed or left untreated, due to lack of experiences; or even the case is thought to be 'too difficult' for further treatment.

In some instances, genetic consultation can help the dentists, not merely to diagnose the condition but also to provide appropriate advice on the prognosis.

In this section, we will address some of these common issues, such as teething, tooth decays, early and late tooth eruption, loss of space, the eruption of the permanent anterior teeth on the back of the primary anterior teeth, periodontitis, dental trauma and, etc.

Teething

Common symptoms include pain, irritability, distracted dreams, drooling, swollen gums, change in eating habits, biting lips and cheeks, chewing things, sucking a finger, bad breathing, sleepiness and sleep disorders, baby's temper tantrum, acne, pulling the ears, coughing and so on [1-9]. When the eruption of primary teeth begins, other changes in the infant's immune system, growth, and development may also occur at the same time. Therefore, an infant may be predisposed to a variety of infections such as respiratory tract infections, urinary tract infections, or even middle ear infections [2,3,10]. Some believe that other symptoms such as diarrhea and fever may not directly be related to the tooth eruption [11-15] and are commonly seen as the some diseases in the baby. The timing of teeth eruption coincides with

the age when infants start to explore the surrounding environment so that they want to take hands and objects into the mouth which, in turn, can carry harmful microorganisms into the mouth and cause infection [11]. Therefore, diarrhea and fever can be caused by this.

Tooth decay in infants

These types of caries are known as Baby Bottle Tooth Decay or Nursing Caries are one of the issues that occur in children under the age of 2 [16] and cause worries in parents as well. This decay generally affects the maxillary primary anterior teeth and, in more severe cases, the upper and lower molar teeth, and even upper canines teeth, but rarely involve the lower anterior teeth [16].

The etiology of ECC has a multi-factorial basis and has been well documented. ECC is frequently associated with a poor diet [17] and bad oral health habits [18]. The main cause of caries is the unlimited breastfeeding or bottle milk overnight in which makes the oral environment always is in acidic PH [19-23]. Unfortunately, most of mother's milk the baby over and over again at night, ignoring that remaining milk on the teeth surfaces, has the greatest impact on the occurrence of tooth decay.

Some studies show milk from the mother's breast provides a good health condition for the baby, but prolonged and repeated milking from the mother's breast or milk bottle can cause caries [21,22]. The amount of sugar in the mother's milk is much higher than bottle milk or cow's milk [24], consequently, health care and limitation in the sequence and frequencies of breastfeeding should be taken seriously after teething.

In children who use a bottle, it is emphasized after the age of one, the baby should be used to drink milk with a glass and prevent the child drinking milk with a bottle in the bed.

Tooth decay in primary school children

Dental caries in primary school children is based on the same principles of caries in preschool children. However, considering that the behavioral and nutritional habits and behavior of the child after entering the primary school are accompanied by wide-spreading changes, unfortunately, the incidence of caries in the age group of primary school children is significantly higher than that of the preschool age group. The most recent national survey shows that 52% of children 5 to 9 years of age have experienced dental caries [25]; however, children 2 to 5 years of age have at least 1 primary tooth with untreated decay which includes 18.7% of the survey [26].

The type of baby's nutrition at this age and the increasing use of junk foods and snacks such as chocolates, sweets and chips can be one of the factors that influence this problem. Children at this age are at a stage where the permanent teeth begin to erupt, and the primary teeth are replaced one after the other. This stage which is known as the mixed dentition creates a condition for the child that due to the inflammation of the gum and pain from the tooth eruption is exposed to the risk of oral hygiene, and the child refuses to brush the affected area. And this, along with the consumption of various snacks, creates the basis for the beginning of progressive tooth caries.

If caries formed in the primary teeth are not treated at this age, given that the decay is an infectious disease and can be transmitted from a tooth to the other one, it can be involved in the fissures of the newly developed permanent teeth which are easily susceptible to incidence of decay.

In the event of the development of dental caries in the deciduous teeth and the lack of timely treatment, it is possible to have early loss of primary teeth and consequently to lose the space. This certainly causes the permanent teeth to erupt inappropriately, and result in forcing the parents to have no options except the orthodontic treatments in the future.

Early tooth eruption

An early teething of a child is a topic that causes parents to worry in many cases. In rare cases, the child has teeth in his mouth at birth, or during the first month, baby's teeth have erupted. In these cases, given that the early teeth 'appearance causes nutritional problems and tongue ulcers in the baby, this causes a trouble to the mothers who feed their baby with the breast. In most cases, the dentist should consider the tooth extraction instead of keeping that. The permanent teeth will erupt in children approximately at the age of 6 years [27] and the teeth eruption in the girls occurs slightly sooner than the boys; European children seem to develop teeth later in comparison to some other ethnicities [28].

If the permanent tooth eruption happens a year earlier than usual, there is nothing to be worried about and even can be considered as a developmental variation. However, if they occur much earlier, for example, if we see permanent teeth in a 4-year-old child, it is necessary the more accurate information be provided by the pediatrician in order to evaluate the general health of the patient.

Late teeth eruption

Often in children, the first permanent molar will erupt between the age of 6 and the age of 7 [27,29] and the second molar will be between 12 and 14 years old [27,30]. There are a number of factors that delay the eruption of permanent teeth. These include local, systemic, and genetic factors. The most important of these factors is the displacement of the tooth buds, large crowns of the permanent tooth, early loss of the primary teeth, lack of space for the eruption, misplacement of the permanent posterior teeth, supernumerary teeth, dental trauma, and infections. Of course, there are other factors that will be described in more detail in the upcoming future article.

The eruption of the anterior teeth on the back of the primary teeth

In some conditions, in spite of the primary teeth are still in their places, one of her permanent teeth might erupt from the side which might worry the parents. In normal conditions, the eruption of permanent teeth gradually put pressures on the roots of the deciduous teeth in which result in root resorption and hence causes the primary teeth to become loose.

On some occasions, a permanent tooth that begins to grow, for some reason is not in its original direction and passes through a deviant path so that the root of the deciduous tooth remains intact without any resorption. This phenomenon is more common in lower anterior teeth where the permanent teeth erupt lingually behind the primary one [31]. This phenomenon is also called "Shark Teeth", but it is not a major concern if in this situation keep in mind the following points:

- If parents noticed a severe permanent teething without a primary tooth losing, they should visit the dentist immediately to start extraction if necessary. However, in the case of lower anterior teeth, there is usually should give more time to grow naturally.
- A permanent tooth which erupts tilted if it is detected in a timely manner and the primary tooth also is extracted at the proper time, make the permanent tooth to move back to its original place.
- If this disorder is detected too late, in the way that the permanent teeth in the deviation path is completely erupted and has reached the level of the opposite tooth level, so that the extraction of the primary tooth would not help the situation any longer, the orthodontic treatment is required instead.

Lack of space and irregularities in permanent teeth

Tilted teeth or irregularities of teeth are one of the most common problems in our societies. Approximately 55% of the people in our communities have a degree of teeth irregularities [32]. The main cause of this disorder is the lack of coordination between the size of the

teeth and the available space in the jaws [33]. In most cases, the primary teeth which are 20 have an acceptable dental arrangement, but in the process of replacing these teeth with permanent teeth, due to the larger total length of permanent teeth, some degree of irregularity and tilting could occur. Fortunately, in the growth process, the natural mechanisms compensate for this difference in size.

When the natural mechanisms do not eliminate the lack of space for the permanent teeth, it leads to the tilted and ugly appearance of the permanent teeth, which is one of the most common causes of referral of patients for orthodontics.

Loss of dental spaces

Early loss of deciduous teeth due to dental caries or dental injuries can result in space closure and lack of space for the permanent teeth eruption [34-36]. In this case, the space maintainer is used to control the space caused by tooth loss so that the permanent tooth guide to the correct position [37,38]. Therefore, if the tooth is extracted earlier than normal time, the child must be placed under the supervision of the dentist. Furthermore, if necessary, different types of space maintainers are temporarily placed in the mouth until the permanent tooth eruption.

Tooth injuries

Living and growing naturally comes with a high probability of injury. A child cannot start walking without falling, and some children will not reach the age of four without having a little trauma to the mouth. We cannot completely prevent the trauma. Given that the prevalence of anterior teeth injuries is higher among children with protruded anterior teeth, it is recommended to reduce the tendency of dental trauma, the protrusion to be treated as soon as possible.

Several studies indicate that the prevalence of traumatic injuries in children has increased recently [39,40]. Dental trauma can lead to teeth displacement, fracture, or tooth loss [41]. The result of traumatic injuries to primary teeth may include the following issues such as alteration in physical appearance, difficulties in speech, and emotional problems, and thus the quality of a child's life [42,43].

Damage resulting from the fracture of an anterior tooth is a very bitter experience for the child and the parents. One of the first actions in these cases is the rapid return of the child's mental health and general condition to the normal situation so that the vacuum of being different from other children to be eliminated as soon as possible.

The development and behavior of children in school or other places may change due to the ugly appearance of the child's face after the dental trauma. In another word, the trauma will also affect the kid's mental state. Needless to say, damage to teeth in children is often accompanied by oral ulcers, bruises, ecchymosis, and skin scratches.

In these cases, the first issue to be considered is the child's vaccination with tetanus. After ensuring that the baby is safe for tetanus, the dentist can proceed with appropriate stages of the treatment.

Gum disease

One of the most common gum diseases in children is gingivitis and periodontitis [44,45], which in children is a result of poor oral hygiene and usually the mouth of these children has a microbial plaque and dental calculus. Oral hygiene is effective in preventing and improving inflammation. Usually in children, when primary teeth get loose and permanent teeth to erupt simultaneously, it causes inflammation in that area due to food impaction. Hence, until the permanent tooth has not reached the correct position, the area should be carefully observed and thoroughly cleaned. Other gum diseases also occur in children, which are not very common. The localized gingival recession and hypertrophic gingiva are the necessary cases to refer to the dentist.

Gingival diseases in a child could endanger the periodontium in adulthood [46]. Therefore, it is essential for this disease to be prevented and diagnosed as early in child's life.

Conclusion

One of the main goals of dental care in childhood, which begins with the first teeth eruption, is to prevent the development of oral caries in children. Prevention dentistry, in addition to giving a beautiful smile to a child, also helps her physical health, because children who have healthy mouths can easily eat food, and nutritious materials can be more easily absorbed by their body, therefore, such children have better general health and conditions. In other words, oral and dental illness can be dangerous to other parts of their bodies. Research shows that poor oral health in children results in poor school performance as well as limited social relationships. Additionally, paying attention to prevention dentistry reduces the cost of treatment, and the duration of stay in the treatment environment, and increases the better cooperation between the children.

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