

Dental Cysts and Eruption Cysts in Children

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Abstract

A dental cyst is a neoplasm of the type of tumor that appears under certain conditions in the jaw of the child and is located in the root region of the tooth. The shape of this cyst is similar to a tear droplet or an oval that is covered with a thick shell and is filled with a yellow purple fluid. The outer layer is connective tissue cells and its inner side consists of a flat and layered epithelium. In this article, we will have a review of dental cysts, eruption cysts, and causes and how to treat it. Typically, eruption cysts do not require treatment. But in the case of other types of cysts, neglecting treatment not only causes discomfort and unpleasantness, but it can also be dangerous and cause serious complications. To prevent these complications, the child should be examined on a regular basis. The type of treatment can vary depending on the severity of the disease and its stage.

Keywords:

Cyst, Tumor, Epithelium.

Types of Dental Cysts in Children

There are six types of cysts that vary according to the causes of cyst formation, complexity, and type of treatments.

Radicular cyst

The most common type of odontogenic cyst has been. This type of cyst often occurs due to inflammation of the tissue surrounding the tooth (a specific connective tissue that holds the tooth in the jaw bone) and is a type of chronic cysts [1].

Follicular cyst

Follicular cyst is the second most common odontogenic cyst, and the most common developmental cyst in the jaw, which attaches to the neck (cervix) of the tooth (the site of the enamel to the tooth cement) and includes the crown of the unerupted tooth. Formation of this type of cyst may be due to the presence of dental buds that cannot erupt and become infected. Another reason is the presence of extra teeth in the jaw. [2,3].

Primordial cyst

Cystic changes in the developing tooth bud lead to the formation of primordial cysts before the formation of enamel. If the teeth do not



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grow properly, the cyst forms in the part of the teeth forming tissue [4].

Paradental cyst

The formation of this type of cyst is due to the prolongation of the process of third molar eruption and is associated with inflammation. This type of cyst often occurs in the lower jaw [5].

Residual cyst

This is usually formed after removal of the roots from the socket [6].

Eruption cyst

This is also called Eruption hematoma [7,8]. This type of cyst usually occurs in children and in the age when teeth begin to erupt (typically aged 6 to 9 years) [9,10]. This type of cyst is prevalent in the anterior area of the upper jaw, the primary molar areas, and the first permanent molars regions [11,12]. Bohn's nodules are the result of cystic degeneration of epithelial rests of the dental lamina. They are benign and usually disappear within the first three months of life. Sometimes they are mistaken by eruption cysts. They are also similar in appearance to Epstein's pearls [13,14].

Causes of Dental Cyst

The causes and sources that cause dental cysts in most cases are:

- Infection in tooth canals due to improper care
- Chronic diseases, including sinusitis, rhinitis, tonsillitis, and similar diseases in the nasopharyngeal region
- Poor immune system for various reasons
- Inflammation of the periodontal tissues located around the teeth
- Periodontitis
- Inflammation under the crown of the tooth leading to chronic type.
- Dental caries leading to infections and affecting the internal tissue.
- Dental trauma or injury to the teeth or jaws
- Difficulty in the eruption of third molar teeth or other teeth in childhood

Causes of Eruption Cyst

Early caries, trauma, infection, genetic predisposition, dental plaque accumulation and the deficient space for eruption can be cited as possible causative factors; However, the exact etiology is debatable and controversy [8,15,16].

Trauma to the gums can cause a cyst to grow up a few weeks before the new teeth eruption. It is not necessary to have a severe blow; it may also be due to normal chewing action.

Another reason for developing an eruption cyst is thickening of the gum tissues. The thickening can be due to the use of certain medications. One of the reasons why this cyst is occurring in young children is the use of cyclosporine, which causes collagen deposition in the connective tissue of the gum, resulting in thicken and unpenetrated tissue. The thicker is the gum, the harder the tooth to erupt.

Dental plaque accumulation in children is the result of poor oral hygiene, inappropriate nutrition, no regular referral to the dentist, and no periodic dental scaling, which may result in eruption cyst.

Symptoms of Dental Cysts in Children

Since the process of forming a cyst is relatively long (about a few weeks), it usually takes some time for a person to notice some of the symptoms. They are generally symptomless, slow-growing, and may reach a large size before they show the symptoms. Some of these symptoms include:

- An unpleasant feeling in teeth and gums when biting or chewing hard food
- Have a feeling of too much pressure on the damaged area
- Changing the unpleasant feeling to the pain and discomfort while eating
- Problems with natural jaw movements while the mouth is open
- Changes in the nature of pain; from mild to severe and acute pain
- Development of small bumps on the gums which grow gradually
- General restlessness and feelings of weakness for no apparent reason, and the possibility of increasing body temperature
- Discharging of pus or fluid suddenly

Sometimes there may be a flowing of fluid and discharges from the gingiva. This means that the bones and cysts are broken) egg shell cracking) and deep scars have formed [17]. Often the first symptom patients experience is pain and swelling if the cyst becomes infected. When the cyst becomes secondarily infected and discharges into the mouth, consequently, a sinus tract may appear. On the other hands, the patient may complain of salty taste or presence of a sinus tract.

Treatment of Dental Cysts in Children

The type of treatment can be varying depending on the severity of the cyst, and the stage of that. Discoloration or loosening of the tooth may prompt patients to visit the dentist to confirm the clinical diagnosis. Hence, a radiological examination is an important tool to provide valuable information. Here are four main methods of professional therapies to consider.

Typically, eruption cysts do not require treatment. Usually, teeth eruption happens within a few days although most of them burst spontaneously. If the eruption cyst remains in the mouth for more than a few weeks, the dentist will make an incision on the cyst to allow the teeth to emerge from the gum. Depending on the level of child anxiety, the dentist can do this under local anesthesia. This is the best treatment that is very simple and does not have any serious consequences.

Cystectomy is a type of surgery that is used to remove part of the root (its damaged part) and cyst removal. This surgery is performed for relatively small cysts that affect at most two teeth. This procedure is performed by creating an incision on the gum. The advantage of this method is that the teeth are not damaged, and retained.

Hemi section, in comparison with cystectomy, is less lenient or in other words, more aggressive than it is. In this procedure, all injured roots, along with the damaged parts of the tooth crown adjacent to it, are completely removed.

The last method is the most aggressive way in which the developed cyst is completely removed. This method is used only

if the tooth is severely damaged so that it is completely impossible to preserve it.

It needs to be explained that the choice of treatment method does not relate to the patient's or the physician's request; it is the size and appearance of the cyst which determines the treatment method. Appropriate and timely treatment almost always leads to complete patient recovery without any serious consequences.

Preventing of Dental Cysts Formation

It is impossible to ensure that children are fully protected from dental cysts. However, there are preventive measures that greatly reduce the risk of such cysts.

Visiting a dentist twice or four times a year. If there is insists on taking x-rays, Parents should by no means resist against it. It is only by this method that all cysts at an early stage can be diagnosed.

Parents should follow the regular and accurate oral hygiene tips, and change the toothbrush every other time because the formation of cysts can be due to a decay that results in inflammation, or it might also be as a result of the lack of proper treatment of caries.

Avoid situations and conditions that could lead to damage to the teeth and jaw.

Take care of the general health of children. This recommendation is one of the prevention methods because reducing immunity weakens the body's defense system. Parents should remember that even the smallest factors can cause dental cysts.

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