



FACTS OF TEETHING: A REVIEW

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ABSTRACT

Infants and their parents usually regard teething as an unpleasant experience. Parents and health care workers have attributed a variety of symptoms to teething in young children. Some of these symptoms may however be indicative of underlying serious medical condition in a child. This article aims to describe the various clinical signs, symptoms, myths, parent's belief and management of teething.

KEYWORDS: Deciduous dentition, Eruption of teeth, Teething.

INTRODUCTION

Sequential appearance of infant's teeth into the oral cavity by breaking through the gums is called as teething. It is a natural physiological process and all children experience it during their childhood. Teething pain is the commonest symptom associated with the eruption of the primary dentition. Teething is also called as "dentition difficilis", which is a Latin word for the pathologic or difficult dentition. ^[1,2]

The period of teething corresponds to the timing of eruption of deciduous teeth, which shows variation as much as six months. The eruption of deciduous teeth usually begins around 4-8 months of age with the eruption of the lower incisors, and is complete at around 30-36 months of age when second deciduous molars erupt. ^[3] Usually 8 day window has been described as the teething period, including the 4 days before tooth eruption and the 3 days following. ^[1,3]

Though the timing as well as process of teething is a joyful expectation of parents, misconceptions are often associated with the process.^[2] Many parents and even some health care givers still associate teething with one symptom or the other with the possibility of overlooking a potentially fatal condition simply because the condition is labelled as “teething”. Therefore, it is advisable that other organic causes need to be excluded in a child who is ill enough to be admitted to hospital, this will enhance the proper management of such a child.^[4] Delayed diagnosis of underlying serious medical conditions on the other hand, can lead to consequences including mortalities from otherwise preventable and treatable diseases.^[5] Although teething is a normal part of infant development, surprisingly little is known about the symptoms, causes and management of teething.^[1]

It is important therefore, that parents and health care worker should have enough knowledge about symptoms of teething and its management. The present article reviews the causes of teething, clinical manifestation, historical aspect, along with treatment perspective.

Causes of teething: Teething is associated with the process of tooth eruption. The dental follicle contains the forming tooth germ. This dental follicle covered by reduced enamel epithelium fuses with the oral epithelium over the cusp of the developing tooth. This overlying epithelium degenerates prior to the eruption of the teeth.^[3,6] Eruption requires bone resorption and formation on opposite sides of the dental follicle for the creation of an eruption pathway. The developing pulp, roots and the periodontal ligament provides the necessary motive force for the eruption.^[3,6] This physiological process of tooth eruption is regulated by an array of genes, hormones, inflammatory mediators and growth factors, which are in most of the times secreted by dental follicle. This may contribute to some of the localized symptoms associated with teething.^[3,6]

Historical aspects: Hippocrates claimed that children experiencing teething suffered from itching gums, fever, convulsions and diarrhea, especially when cutting their canines.^[2,7] In previous centuries, infant mortality rate was extremely high. This typically has its peak level at 6 months to 4 years of age, which corresponds to tooth eruption. Thus, it was believed that teething was the cause of death.^[6,8-10]

In 1839, 5016 child deaths in England and Wales were attributed to teething.^[2,7] Dr. Thrasher, a well-known dentist, wrote in *Dental Cosmos (1894)*, “so deadly has teething become that one third of the human family die before 20 deciduous teeth have fully

appeared”.^[6] Also, 'Teething convulsion' was a frequent diagnosis until recent years, and symptoms of infections of upper respiratory tract are persistently blamed on the eruption of teeth.^[11]

Teething disturbances: Three common perceptions of teething have been described as3:

1. Teething is pathological and has cause-effect relationships with symptoms,
2. Teething is physiological, symptoms are merely co-incidental
3. Teething is predominantly physiological, and discomfort is a normal consequence.

Symptoms: Traditionally teething has been considered as cause for a variety of symptoms and signs associated with tooth eruption in the young child, both by parents and doctors.^[5]

The signs and symptoms associated with teething may be local or systemic. Local teething symptoms are pain, gingival swelling, irritation, redness of the gum, thumb sucking, circumoral rash and gum rubbing.^[1,4,12] The systemic disturbances that are associated with teething are loss of appetite, crying, increased salivation, drooling, diarrhea, boils, general irritability, fever, runny nose, conjunctivitis, and some day-time restlessness. Moreover, increased biting, wakefulness, ear rubbing and facial rashes have also been reported to be associated with teething.^[1,4,12,13]

Teething pain:- Adults assume an infant is experiencing pain because they believe the incisal edges of teeth “cut through” the alveolar bone and gingiva during eruption or because they appear distressed.^[3] Pain may result from elevation of inflammatory mediators in the crevicular fluid and in tissues surrounding the erupting tooth, which stimulate nociceptive receptors.^[3] Local pain may be further exacerbated by rubbing or scratching the gingival tissues, by biting into hard objects, or by the presence of pathology such as eruption cysts.^[3]

Management: Historically, caregivers have taken a variety of approaches to the symptomatic relief of discomfort associated with teething, including placing leeches on the gums, applying cautery to the back of the head, blistering and administering systemic medicaments.^[13]

Treatments for teething in the 6th century included drinking dog's milk, eating or placing hare brains on the gums and employing charms and amulets. In the 18th and 19th centuries, purgatives and emetics were common treatments, even if the child presented with vomiting and diarrhea. Other common remedies included bromide, lead, opiates, mercury salts, honey

and salt. But such remedies no longer are used nowadays because of their well-known toxicities.^[6]

Recently, it is believed that teething can be managed by pharmacological and non-pharmacological means, but this has yet to be proven. Non-pharmacological strategies aim either at cooling the teething site and/or rubbing the site. It includes allowing the infant to chew on hard objects and rubbing substances on gums have become popular practices. Chewing on clean, hard, cool objects, such as chilled teething rings and rattles, cold wet wash cloths, chilled hard vegetables and cold wet wash cloths may provide relief from soreness.^[10,13]

Pharmacological strategies for teething generally aim to achieve analgesia, anesthesia, sedation or a combination of these. The conservative use of acetaminophen and ibuprofen can aid in relief of the discomfort caused by teething. Benzocaine at a concentration of 20% gives temporary relief of pain on mucosal tissues.^[1]

CONCLUSION

Although teething is a physiological process, it is often associated with pain and discomfort to the child. There are various misbeliefs about teething in parents and doctors. As the symptoms of teething can also be of other underlying conditions, every parents and the concerned health care worker should have enough knowledge about the proper teething management. So that it can be managed in a proper way, which is very important according to the patient's point of view.

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