International Journal of Current Advanced Research
ISSN: O: 2319-6475, ISSN: P: 2319-6505, Impact Factor: 6.614
Available Online at www.journalijcar.org
Volume 7; Issue 7(G); July 2018; Page No. 14316-14318
DOI: http://dx.doi.org/10.24327/ijcar.2018.14318.2591

Research Article

PREDECIDOUS TEETH: SUPERSTITIONS AND REALITY

ArtiDolas[1] and HirojBagde[2]

[1]Department of Pedodontics & Preventive Dentistry Government Dental College, Nagpur
[2]Department of Periodontology, New HORIZON Dental College, Bilaspur

A R T I C L E I N F O

Article History:

Received 11th April, 2018
Received in revised form 4th May, 2018 Accepted 23rd June, 2018
Published online 28th July, 2018

Key words:

Natal Teeth, Neonatal Teeth, Extraction

A B S T R A C T

Normally, first tooth erupts in oral cavity at the age of 6 months. Eruption of tooth at birth or immediately after birth is a rare phenomenon. The teeth if present at birth are called as natal teeth and those which erupt during first 30 days of birth are called as neonatal teeth. Historical background of natal and neonatal teeth traces way back to 59 BC. It is associated with various complications such as difficulty in suckling, risk of aspiration, sublingual ulcerations, injury to mother's breast. Hence, the etiological factors along with clinical and histological features, differential diagnosis and its management are briefly discussed.

INTRODUCTION

Normal eruption of primary teeth in oral cavity begins as early as 6 months. The teeth that erupt prematurely have been reported in literature. The rare occurrence of natal and neonatal in past is associated with a lot of superstition and folkfore. They are further accompanied by various complications like pain on suckling, ulceration on ventral surface of tongue of child, injury to mothers breast which further leads to poor nutrition to the child.

History

Natal and neonatal teeth were first documented by Titus Liviusin 59 BC whoconsidered natal teeth to be prediction of disastrous events. Caius pliniussecundus (elder) in 23 B.C said that the male infant born with natal or neonatal teeth had a splendid future waiting ahead whereas it was said to be bad omen for female infants. In African tribes, childwith natal or neonatal tooth was killed as soon as it was born as it was believed that the child wouldbring misfortune to all in contact with him. In China,it was believed that infant born with teeth would cause bad omen for the family. It was also said that when the natal tooth would begin to bite, one of the parents would die. In England, it was believed the child would grow to become a famous soldier. In France and Italy, the belief was that this condition will guarantee the conquest of the world. In Malaysian communities it was considered as good omen.

Corresponding author:* **ArtiDolas
Department of Pedodontics & Preventive Dentistry
Government Dental College, Nagpur

In contrast to this, in Indian community it was considered to be bad omen, the baby was considered to be unlucky or devils incarnation. [1,2,3,6,7,8,10,11,12]

Prevalenceand Incidence

The incidence of natal teeth and neonatal teeth ranges from 1:1000 to 1:30000[3]. A prevalence rate of 1:716 has been reported by Kates *et al*(1984).[1,4,14]Alwright(1958) reported a prevalence rate of 1:3408 while Puech in 1876 reprted a prevalence of 1:30000. Massler&Savara reported a prevalence of 1:2000 and Almeida &Gomide in 1996 reported prevalence of 1:21.6[. 2,3,5] The variation in prevalence is observed due to different population studied and different methods employed in each study. No difference is observed between males and females prevalence although some studies report a female predilection. In a clinical study of 38 cases by kates *et al* (1984), 25 were females and 13 were males.[14]

Syndromes associated with natal teeth

Some investigators suggested that natal and neonatal teeth are seen with some systemic conditions or syndromes .[2,3,4,7,11]The syndromes or conditions associated are listed in table 1.

Etiology

The etiology of natal and neonatal teeth is still unknown. There are various hypothetical factors reported in literature by investigators. Amongst which superficial position of germ associated with hereditary factor is the most accepted one.Poor maternal health, endocrine disturbances, febrile episodes (fever, exanthema) during pregnancy causes nutritional deficiencies like hypovitaminosis which causes accelerated

eruption. Infections for example congenital syphilis have varying effects on the tooth germ. Endocrine disturbances have also been said to accelerate eruption.[3,4,6,11] Maternal exposure to environmental toxins like polychlorinated biphenyl (PCB), polychlorinated dibenzofuran (PCDF), polychlorinated dibenzo-p-dioxin (PCDD) also has shown natal teeth prevalence.[3]Gladden *et al* reported 18 out of 128 newborns examined, whose mothers were exposed to polychlorinated biphenyl (PCB) and dibenzofuran had natal teeth.[12]

Table 1 Syndromes associated with natal and neonatal teeth

Hallerman-Strieff syndrome	Ellis-Van Creveld syndrome
Multiple Steatocystoma	Craniofacial Dysostosis
Congenital Pachyonychia	Sotos Syndrome
Adrenogenital syndrome	Cleft lip cleft palate
Epidermolysis bullosa simplex	Craniosynostosis
Vander woude syndrome	Jadassohn-Lewandowsky syndrome
Ectodermal dysplasia	Wiedemann-rautenstrauch syndrome
Pfeiffer syndrome	Pallister-hall syndrome
Rubinstein-taybi syndrome	Pierre Robin syndrome
Polydactyly type II	Walker-Warburg syndrome

Classification

Depending on the degree of maturity, Spoug and Feasby (1966)[15] classified natal and neonatal teeth as

i. Mature - natal or neonatal tooth that are fully developed in shape and have comparable morphology like normal teeth.
ii. Immature – natal or neonatal tooth that show incomplete development.

According to appearance of tooth, Hebling (1997)[16] classified natal and neonatal teeth into four clinical categories

1. Shell-shaped crown poorly fixed to the alveolus by gingival tissue and absence of a root.
2. Solid crown poorly fixed to the alveolus by gingival tissue and little or no root.
3. Eruption of incisal margin of the crown through the gingival tissues.
4. Edema of the gingival tissue with an unerupted but palpable tooth.

Synonyms

Different terminologies such as congenital, fetal teeth, predecidous teeth, Dentitia praecox, precociously erupted teeth, premature teeth, Dens connatalis have been used to describe these teeth in literature.[4,6] Currently adopted terms are “natal” and “neonatal” given by Massler and Savara which only defines the time of eruption.[1,2,3,6] No consideration is given to anatomy, histology, whether the tooth belongs to primary dentition or supernumerary tooth.

Clinical features

Clinically natal or neonatal teeth are conical or normal in shape and Yellowish brown / whitish opaque in colour depending upon the degree of maturity.[4,6] They may show immature appearance with enamel hypoplasia / hypomineralization. According to Biegard *et al*, the dimensions of crown are smaller than normal primary teeth. These natal or neonatal teeth are usually attached to soft tissue pad above the alveolar ridge, occasionally covered by mucosa which results in exaggerated mobility.[4] Most commonly affected teeth are mandibular incisors (85%) followed by maxillary incisors (11%), mandibular canine and molars(3%) and maxillary canines and molars(1%).[4,6,8]In 61%of cases, the teeth are double or in pairs and mostly correspond to normal primary dentition in 95% cases while 5% are supernumerary.[2] Gonclaves *et al* (1998) reported a case of newborn with 12 natal teeth.[13]

Histological features

First microscopic evaluation of natal and neonatal teeth was done by Howkins in 1932.[6] He reported normal dentin except for certain irregular spaces in region close to amelodentinal junction and a large pulp chamber. Other Histological investigations have demonstrated that most of the crowns are covered with hypoplastic enamel with varying degree of severity, absence of root formation, irregular dentin formation and lack of cementum formation.[6] Friend *et al* demonstrated that there is alteration in amelogenesis due to premature exposure of the tooth to oral cavity.[4,6] Soni *et al* reported that cervical area of teeth had irregular dentin and osteodentin like structures with large interglobular areas of dentin and hypoplastic enamel.[4]

Differential diagnosis

The differential diagnosis of natal and neonatal teeth includes, cysts of dental lamina which are pale yellowish white circumscribed lesions on alveolar ridge of newborns. Other differential diagnosis may include Bohn nodules, OdontogenicHemartoma, Lymphangioma, Epulis. [3,7,10] Supernumerary tooth may be differentiated from normal sequence of primary tooth using occlusal or periapical radiographs. But there is difficulty in proper positioning of the film in mouth of newborn and during growth and development phase primary teeth are undergoing initiation of crown calcification which makes radiographic interpretation difficult.

Diagnosis

Diagnosis of natal or neonatal teeth is done by clinical evaluation and radiographic assessment to rule out whether the tooth is from normal dentition or is supernumerary so that no indiscriminate extraction is performed. Radiographic examination also reveals the root development of the tooth, adjacent structures and the existence of a relative tooth germ in primary dentition. Proper diagnosis is very important for treatment planning.

Management

Maintenance of the natal or neonatal tooth in the mouth is the primary option. Different factors are considered for management of natal or neonatal teeth which include implantation, degree of mobility, inconvenience during suckling to the infant, interference with breast feeding, possibility of traumatic injury to mother’s breast or to the ventral surface of tongue of the infant.[2,3] If the tooth is well implanted it is betterto leave the tooth as it is unless it causes any trauma to mother or the infant. If the tooth is not well implanted or is mobile it is advisable to perform extraction to avoid the risk of aspiration. Other optionsinclude smoothening of incisal edges, covering of incisal edges with composite resin and feeding plate all of which prevents wounding of maternal breast as well as tongue of the infant.[2,3]If the treatment option is extraction, certain precautions should be taken that include

avoiding of extraction up to 10th day of life to prevent hemorrhage, assessing the need to administer vitamin K before extraction and assessing the general health of the patient. The waiting period of 10 days before the extraction is due the need to commensal flora of the intestine to become established to produce vitamin k which in turn is required for production of prothrombin in liver. If it is not possible to wait for 10 days, then it is advisable to evaluate the need for administration of vitamin k. If the child is not given vitamin K immediately after birth, then vitamin K (0.5-1.0 mg) should be administered intramuscularly as a part of immediate medical care to prevent hemorrhage.[2,3,4,5,6,7,8,9,10,11]

CONCLUSION

Natal and neonatal teeth diagnosis requires a detailed case history, proper radiographic evaluation and a thorough clinical examination. A proper decision is to be made considering various factors like degree of mobility, inconvenience during suckling to the infant, interference with breast feeding, possibility of traumatic injury to mother's breast or to the ventral surface of tongue of the infant. A proper follow-up should be followed.

References

1. Bodenhoff J, Gorlin R.J. Natal and Neonatal Teeth: Folklore and Fact. *Pediatrics* 1963;32:1087-93
2. Cunha RF, Boer FA, Torriani DD, Frossard WT. Natal and neonatal teeth: review of the literature Pediatric Dentistry 2001 Dec;23(2):158-62
3. Ardeshana A, Bargale S, Karri A, Dave B. Dentitia Praecox - Natal Teeth: A Case Report and Review. *Journal Of Applied Dental And Medical Sciences* 2016;2(1):44-51
4. Anegundi R.T, Sudha P, Kaveri H, Sadanand K Natal and neonatal teeth: A Report of Four Cases. *J Indian Soc PedoPrev Dent* 2002 sep;20(3):86-92
5. Kana A, Markou L, Arhakis A, Kotsanos N. Natal and neonatal teeth: a systematic review of prevalence and management. *Eur J Paediatr Dent* 2013 Mar; 14(1);27-32
6. Rao RS, Mathad SV. Natal teeth: Case report and review of literature *Journal of Oral and Maxillo Facial Pathology* 2009; 13(1): 41-46
7. Nirmala SVSG, Prabhu RV, Veluru S, Tharay N, Kolli NK. Natal Teeth - A Case Report with Decision Support System. *J Pediatr Neonatal Care* 2015; 2(3): 00073. DOI: 10.15406/Jpnc.2015.02.00073
8. Sothinathan R, Shakib K. Natal teeth: a sign of fortuity or grave misfortune. *British Dental Journal* 2011;210(6):265-6
9. SemihSert, CengizOzçelik, JaleTanalpNatal teeth (a case report) OHDMBSC 2004; III(1) 61-4
10. I. Markou, A. Kana, A. Arhakis Natal and Neonatal Teeth: A Review of the Literature *Balk J Stom, Vol 16, 2012 132-140*
11. SwatiChowdhary, SandeepTandon. "Congenital teeth: Superstition and Reality – A Case Report and Review of Literature". *International Journal of Scientifi c Study.* 2014;1(5):53-56
12. Gladen BC, Taylor JS, Wu Y-, Ragan NB, Rogan WJ, Hsu C Dermatological findings in children exposed transplacentally to heat-degraded polychlorinated biphenylsin Taiwan. *Br J Dermatol,* 1990; 122(6):799-808.
13. Gonçalves FA, Birman EG, Sugaya NN, Melo AM. Natalteeth: review of the literature and report of an unusual case. *Braz Dent J,* 1998; 9(1):53-56.
14. Kates GA, Needleman HL, Holmes LB: Natal and neonatal teeth: a clinical study. *J Am Dent Assoc* 109: 441-443, 1984
15. Spouge JD, Feasby WH. Erupted teeth in the newborn. *Oral Surg Oral Med Oral Pathol*. 1966; 22:198-208.
16. Hebling J, Zuanon ACC, Vianna DR. Dente Natal-Acase of natal teeth. *OdontolClin*. 1975: 7:37 – 40.

How to cite this article:

ArtiDolas and HirojBagde (2018) 'Potential Effect of Agricultural Waste on Different Pathogenic Microbial Strains', *International Journal of Current Advanced Research,* 07(7), pp. 14316-14318.
DOI: http://dx.doi.org/10.24327/ijcar.2018.14318.2591

****