Natal and neonatal teeth: a systematic review of prevalence and management

ABSTRACT

Aim The purpose of this systematic review was to identify and review the literature concerning natal and neonatal teeth. Study design and methods The literature search was conducted using several databases. Specific terms were used in the search, which includes articles from 1950 to 2011, supplementary searching by hand was also used. Relevant studies were selected according to predetermined inclusion criteria. Results Studies meeting the inclusion criteria were only found with regards to prevalence and management of natal and neonatal teeth. Prevalence ranged from near 0 to 1:10 while extraction or maintenance of teeth comprised the management options. Conclusion There is significant need for further research, under specific scientific preconditions, to provide an evidence-based treatment for patients and to determine the prevalence of natal and neonatal teeth more precisely. Keywords Management; Natal teeth; Neonatal teeth; Prevalence; Systematic review.

Introduction

The eruption of primary teeth typically begins around the age of 6 months. Teeth observed at birth are considered as natal teeth, or, if observed during the first 30 days, as neonatal teeth, based on the classification given by Massler and Savara [1950]. The rare occurrence of natal and neonatal teeth has led to their association with superstition and folklore. On one hand, some cultures have believed that children born with teeth were favoured, particularly in Western Europe and Malaysia; on the other hand, in such places as Poland, India, China and Africa these children were considered to be monsters or evil children.

The exact aetiology has yet to be proved, but there is a correlation between natal teeth and hereditary or environmental factors and some syndromes. Today, this phenomenon attracts significant interest and concern to both parents and clinicians owing to their clinical characteristics (small size, conical shape, great mobility) which can cause complications such as laceration of the mother’s nipple during breast feeding, sublingual ulceration and risk of aspiration of the teeth [Allwright, 1958; Kates et al., 1984; King and Lee, 1989; Rusmah, 1991; De Almeida and Gomide, 1996; Alaluusua et al., 2002].

The objective of this systematic review is to identify and review the literature on natal and neonatal teeth.

Materials and methods

To find the relevant articles the databases Medline, Embase and Sciencedirect were searched from 1950 to April 2011. The Medline search was based upon the following key words: natal and neonatal teeth in all fields (limit: English). A similar search with the same key words and limit was conducted in Embase. The Sciencedirect search was based on the key words “natal and neonatal teeth” with limit: Journals. Irrelevant articles were excluded by title. From the 138 articles found in Medline, 24 were excluded by title. From the 73 articles found in Embase, 18 were excluded by title, 1 was listed twice, and from the remaining 54, only 1 was not also found in Medline. In Sciencedirect, from the 43 articles found, 2 were excluded on the grounds of language, 1 was listed twice and 21 were excluded by title. From the remaining 19, only 9 had not been found in previous searches in Medline and Embase. From these 124 articles, 25 were excluded upon reading their summary due to lack of relevance. At this stage, 99 articles remained. The hand search for relevant studies came up with 10 articles that matched our search.

The inclusion criteria were the survey of at least 100 infants and the reference of >3 patients treated. Case reports, or opinions expressed in non-systematic reviews, or books were not considered strong evidence and were therefore excluded. Of the 109 articles found, 22 matched our inclusion criteria. The inclusion and exclusion criteria are summarised in Table 1. Four articles were excluded because it was not possible to obtain the full text, even after attempts to communicate with their authors. As a result, 18 articles remained. Since these 18 articles only review the prevalence and management of natal and neonatal teeth, this has been taken as the focus of the systematic review.

Keywords Management; Natal teeth; Neonatal teeth; Prevalence; Systematic review.
INCLUSION CRITERIA
1 Survey of at least 100 infants
2 > 3 patients treated

EXCLUSION CRITERIA
1 Case reports
2 Non-systematic reviews
3 Books
4 Articles that do not state their material and methods

TABLE 1 Inclusion and Exclusion criteria.

Results

Prevalence

The prevalence of natal and neonatal teeth has been reviewed by many authors all around the world. In 1958, Allwright reported the incidence of natal teeth as derived from the records of Tsan Yuk hospital in Hong Kong, China in the year 1953. Out of a total of 6,817, two infants were born with natal teeth and so he estimated the incidence of natal teeth to be 1:3,400. Allwright also stressed the difficulty of estimating the incidence of neonatal teeth because mothers and their babies usually returned home a few days after birth and many did not report back. He concluded that no accurate estimation of neonatal teeth could be arrived at, despite the information that 10 babies were known to have neonatal teeth after they were released from the hospital [Allwright, 1958].

Another estimation of natal teeth was made in 1970 by Gordon and Langley at a U.S.P.H.S. Indian Hospital in Oklahoma, USA among Native Americans. From the 407 infants born, and examined by the authors over a period of 2 years, 4 had natal teeth. They estimated the prevalence of natal teeth to be 1:100 [Gordon and Langley, 1970].

In 1972, Jarvis and Gorlin investigated the prevalence of minor orofacial abnormalities in an Inuit population. The total population studied consisted of 1,571 Inuit who were mainly from the high Arctic, in the Baffin Zone of the Canadian Northwest Territories. The data for the prevalence of natal teeth were gathered by questioning the mothers and by questioning Inuit girls employed as interpreters and dental assistants. The results showed 16 infants with natal teeth. The authors concluded that the numbers represented minimum figures and that the incidence of natal teeth (1:100) seemed to be higher in the Inuit population [Jarvis and Gorlin, 1972].

Kates et al. conducted a study over a period of three years from 1972 to 1975 at the Boston Hospital for Women (part of the Brigham and Women’s Hospital), USA, covering 18,155 infants. For 11,000 infants the data were collected by questioning the nursery and morgue personnel on a weekly basis, whereas another sample of 7,155 infants was examined by a physician or a trained research assistant. The prevalence of natal teeth for the 11,000 infants surveyed was 1:3,667 and for the 7,155 infants examined 1:716. They also gave an estimated prevalence of 1:1,397 of natal teeth for all 18,155 infants, and stated that their prevalence study showed no evidence of excess of females in contrast to their clinical study, something they attributed to greater parental concern about affected females [Kates et al., 1984].

In 1989, King and Lee, at Prince Philip Dental Hospital in Hong Kong, reported the incidence of natal and neonatal teeth from a nearby maternity unit between 1982 and 1986, to be 1:1,324. The incidence was derived from the records of the hospital. Separately, the prevalence of natal teeth was estimated to be 1:2,500 and of neonatal teeth 1:2,813. They state though that they did not examine all infants but only the 44 referred to them (23 were boys and 21 girls), and they agreed with Allwright that the estimation of neonatal teeth shows only the minimum figures [King and Lee, 1989].

Gladen et al. report the dermatological findings in children exposed transplacentally to heat-degraded polychlorinated biphenyls in Taiwan, and refer to the presence of natal teeth in 13 children out of the 128 exposed children surveyed born in or after June 1978, in contrast to no infants of the surveyed control group (none exposed) children. The research was done by questioning the families of the children. This gives a prevalence of 1:10 in the affected children [Gladen et al., 1990].

In 1991, Rusmah reports a prevalence of 1:2,325 for both natal and neonatal teeth grouped together, in a study of 9,600 infants born in a maternity unit in Kuala Lumpur, Malaysia between 1985 and 1989. The infants were examined by the resident paediatrician soon after delivery and were observed for at least 5 weeks [Rusmah, 1991].

In 1991 another study was published giving a prevalence of 1:1,118 among Chinese in Hong Kong. The author reported the presence of natal teeth in 48 infants among 53,678 born at Queen Elisabeth Hospital during a 5 year period (1984-1989). The children were first examined by the medical officers of the obstetrics and gynaecologic unit of the hospital for any anomalies of the oral cavity, and if any were found, they were then referred to the dental unit to be examined by the author [To, 1991].

In 1994 Flinck et al., from 1,165 live births at the Ostersund County Hospital in Sweden, in a study of oral findings where examinations were performed by two of the authors, report zero natal or neonatal teeth [Flinck et al., 1994].

In 1996, De Almeida and Gomide conducted a study on the prevalence of natal and neonatal teeth among infants with cleft lip and palate. Their results were from the 1,019 infants registered at the Hospital of Research and Rehabilitation of Cleft Lip and Palate in Sao Paolo, Brazil, from 1989 to 1994. A total of 47 infants, 14 with
unilateral and 33 with bilateral cleft lip and palate, had natal and neonatal teeth. A higher prevalence was found in the complete bilateral cleft lip and palate (1:10), than in unilateral cleft lip and palate (1:50). The authors state a higher rate of males than females [De Almeida and Gomide, 1996].

In 2002 Alaluusua et al. published an article about the prevalence of natal and neonatal teeth in relation to environmental toxicants. From a total of 34,457 newborn children examined by the paediatricians of the 4 hospitals operating in the area of Turku and Helsinki, Finland (Jorvi Hospital; Departments of Obstetrics and Gynecology, Helsinki University Central Hospital; Helsinki City Maternity Hospital; and Turku University Central Hospital), 29 had natal teeth. The paediatricians had recorded neonatal teeth in 8 children after birth but only 5 were true neonatal teeth. The prevalence results for natal teeth were 1:1,188 and for natal and neonatal teeth 1:1,013. Concerning the PCDD/Fs (PCDF, polychlorinated dibenzofuran PCDD, polychlorinated dibenzo-p-dioxin) and PCB (polychlorinated biphenyl) concentrations in the mother’s milk, there seemed to be no relation between them and natal and neonatal teeth [Alaluusua et al., 2002].

A clinical study by Adib et al. in 2003 for oral findings in neonates showed a prevalence of 1:523 for natal teeth. The study included examination of 523 live births in the period comprised between February 1999 and 20 April 1999 at the Maternity of Monastir, Tunisia by two dentists – authors [Adib et al., 2003].

Liu and Huang in 2004 reported an incidence of 1:140 of natal and neonatal teeth in a study of 420 infants born in Chang Gung Memorial Hospital in Taipei, Taiwan after examination of the infants by a dentist. The authors found 2 subjects, one with 1 natal teeth and the other with 2 neonatal teeth and estimated the prevalence per total number of the teeth instead of the total number of children, as done in all the other studies [Liu and Huang, 2004].

Another study about oral lesions seen at birth was conducted by Mohammadzadeh and Mokhtari at the Mashhad Sina Hospital in Iran throughout 1982, but was not published until 2005. The examination of 3,298 infants showed 4 babies with natal teeth and a ratio of 1:2,100 live births [Mohammadzadeh and Mokhtari, 2005].

A study about the prevalence of oral lesions in Mexican newborns was done at San Luis Potosi Morones Prieto Hospital in Mexico between September 1989 and February 1990 and was published in 2008 by Freudenberger et al. The examination of all infants was done by an oral pathologist with the assistance of a geneticist, an oral surgeon, and 2 dentists. The result of this study was an incidence of 1:50 out of the 2,182 infants examined, and a ratio of 1:2.3 for males/females [Freudenberger et al., 2008].

The last study about oral anomalies in infants was published in 2008 by George et al. It is a study in newborn children in and around Mangalore, Karnataka State, India. The institutions in which this study took place were: Yenepoya Medical College Hospital, Deralakatte; Father Muller Medical College Hospital, Kankanady and AJ Institute of Medical Sciences, Kuntikana, Mangalore, India. A total of 1,038 newborns were examined and an incidence of 1:1,038 for natal teeth was recorded [George et al., 2008].

All the above findings are summarised in Table 2.

Management

The treatment plan of natal and neonatal teeth is based on whether these teeth are able to remain in the oral cavity without causing any complications (laceration of the mother’s nipple and feeding disorders due to sublingual ulceration of the tongue, and pain generated by pressure on the mobile tooth). A clinical study of 26 cases of natal and neonatal teeth among Chinese from maternity hospitals, post-natal and dental clinics in Hong-Kong was conducted. The study included 11 infants with natal teeth and 17 with neonatal teeth. Twelve natal teeth from 9 infants and 13 neonatal teeth from 8 infants were extracted on the grounds of signs of mobility, while the retained teeth required re-examination to trim their sharp edges. No measures were taken to control bleeding after extraction, in spite of the warnings of hypoprothrombinemia in the literature [Allwright, 1958].

From 407 Native American infants born in the Indian Hospital in Oklahoma, only 4 had natal teeth. In two of these cases the teeth were extracted due to mobility. A dental radiography from two infants revealed that the teeth were part of the primary dentition. A re-evaluation in the two non-extraction cases revealed that in one case the tooth was firmly in place after 10 days and in the other case the tooth was also stable but discoloured at the age of 21 months [Gordon and Langley, 1970].

Kates et al [1984] studied a group of 38 infants and children that were found to have 40 natal and 21 neonatal teeth. Fifty (82%) of the 61 natal and neonatal teeth were reassessed and categorised into three groups on the basis of the survival time. In group one (27 teeth), teeth were extracted before the age of 4 months due to excessive mobility. In group two (2 teeth, both supernumerary), teeth were lost between 4 and 13 months because of traumatic avulsions. In group three (21 teeth), teeth remained in the oral cavity for more than 13 months. Three of the 21 teeth in this group were lost prematurely, 2 were extracted because of chronic alveolar abscesses and 1 exfoliated prematurely at 18 months. Five of the 21 teeth were followed to their normal age of exfoliation. The remaining 13 teeth were still present at age 13, 15, 17, 18, 20, 36, and 48 months, having normal mobility and various stages of enamel attrition and dysplasia. As a result, it was strongly recommended that natal and
neonatal teeth should be left in place, if possible, and be removed only if extremely mobile (Kates et al., 1984). Another clinical study of prematurely erupted teeth in 44 toddlers (26 natal teeth, 33 neonatal teeth) was that of King and Lee (1989). Twenty-five teeth (42.4%) were extracted, 21 due to excessive mobility over a 3-month recall period; 10 of the extractions (40%) were performed during the first 10 days of life with a prophylactic dose of vitamin K. Other reasons for extraction were immature structure or injuries to soft tissues like sublingual ulceration which was noticed in 8 patients (18.2%). In 3 of these cases the prematurely erupted teeth were extracted; in 4 of them the sharp edges of the teeth were ground, while the ulcer was healed in the last one without treatment. Only 3 (6.8%) of the infants had feeding difficulties, 2 of them were breast-fed and 1 had an extremely mobile natal tooth. It was pointed out by the authors that extraction of natal or neonatal tooth appears to be a simple procedure because the tooth is mobile. The underdeveloped cells of

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>(N)</th>
<th>Natal</th>
<th>Neonatal</th>
<th>Gender</th>
<th>Race</th>
<th>Study</th>
<th>Position</th>
<th>Prevalence</th>
<th>Clic</th>
</tr>
</thead>
<tbody>
<tr>
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<td>6,817</td>
<td>2</td>
<td>NS*</td>
<td>NS*</td>
<td>Asian</td>
<td>retrospective</td>
<td>NS*</td>
<td>1: 3,400</td>
<td>FC</td>
</tr>
<tr>
<td>Gordon and Langley (1970)</td>
<td>407</td>
<td>4</td>
<td>0</td>
<td>3 females, 1 male</td>
<td>American Indian</td>
<td>NS*</td>
<td>4 central incisors</td>
<td>1:100</td>
<td></td>
</tr>
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<td>Jarvis and Gorlin (1972)</td>
<td>1,571</td>
<td>16</td>
<td>0</td>
<td>NS*</td>
<td>Eskimo</td>
<td>NS*</td>
<td>12 central incisors</td>
<td>4 central incisors</td>
<td>1:100</td>
</tr>
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<td>18,155</td>
<td>13</td>
<td>0</td>
<td>NS*</td>
<td>NS*</td>
<td>prospective</td>
<td>NS*</td>
<td>1: 1,397</td>
<td>FC</td>
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<td>9</td>
<td>8</td>
<td>NS*</td>
<td>Asian</td>
<td>retrospective</td>
<td>NS*</td>
<td>1:1,324</td>
<td>FC</td>
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<td>Gladen et al. (1990)</td>
<td>128</td>
<td>13</td>
<td>0</td>
<td>NS*</td>
<td>NS*</td>
<td>NS*</td>
<td>NS*</td>
<td>1:10</td>
<td>FC</td>
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<tr>
<td>Rusmah (1991)</td>
<td>9,600</td>
<td>4</td>
<td>NS*</td>
<td>NS*</td>
<td>NS*</td>
<td>5 incisors</td>
<td>NS*</td>
<td>1:2,325</td>
<td>NaOCl</td>
</tr>
<tr>
<td>To (1991)</td>
<td>53,678</td>
<td>48</td>
<td>0</td>
<td>23 females, 25 males</td>
<td>Asian</td>
<td>NS*</td>
<td>72 central incisors</td>
<td>1:1,118</td>
<td></td>
</tr>
<tr>
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<td>1,021</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>98% Caucasian</td>
<td>population-based</td>
<td>-</td>
<td>0</td>
<td>FC</td>
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<td>De Almeida and Gomide (1996)</td>
<td>1,019</td>
<td>unilateral cleft lip and palate</td>
<td>14</td>
<td>17 females, 30 males</td>
<td>NS*</td>
<td>retrospective</td>
<td>incisors 100%</td>
<td>1:50</td>
<td>FC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>bilateral cleft lip and palate</td>
<td>33</td>
<td>14 females, 30 males</td>
<td>NS*</td>
<td>-</td>
<td>incisors 74%</td>
<td>1:10</td>
<td>NaOCl</td>
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<tr>
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<td>29</td>
<td>5</td>
<td>NS*</td>
<td>NS*</td>
<td>NS*</td>
<td>55 central incisors</td>
<td>1:1,013</td>
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</tr>
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<td>Abid et al. (2003)</td>
<td>523</td>
<td>1</td>
<td>0</td>
<td>female</td>
<td>NS*</td>
<td>population-based</td>
<td>2 incisors, 2 molars</td>
<td>1: 523</td>
<td></td>
</tr>
<tr>
<td>Liu and Huang (2004)</td>
<td>420</td>
<td>1</td>
<td>1</td>
<td>NS*</td>
<td>Asian</td>
<td>NS*</td>
<td>3 incisors</td>
<td>1:140</td>
<td></td>
</tr>
<tr>
<td>Mohammadzadeh and Mokhtari (2005)</td>
<td>3,298</td>
<td>4</td>
<td>0</td>
<td>NS*</td>
<td>NS*</td>
<td>cross sectional</td>
<td>NS*</td>
<td>1:2.1:000</td>
<td>NaOCl</td>
</tr>
<tr>
<td>Freudenberger et al. (2008)</td>
<td>2,182</td>
<td>50</td>
<td>0</td>
<td>35 females, 15 males</td>
<td>NS*</td>
<td>NS*</td>
<td>NS*</td>
<td>2:3:100</td>
<td>FC</td>
</tr>
<tr>
<td>George et al. (2008)</td>
<td>1,038</td>
<td>3</td>
<td>0</td>
<td>NS*</td>
<td>Indian or Asian</td>
<td>population-based</td>
<td>NS*</td>
<td>3:1,038</td>
<td></td>
</tr>
</tbody>
</table>

* not specified

**TABLE 2** Prevalence of natal and neonatal teeth
the dental papilla and those of the Hertwig root sheath, however, might easily be detached from the calcified part of the tooth and remain in the alveolus, possibly developing into a tooth-like structure that erupts many months or even years later. This was reported to have occurred in 4 of the children (9.1%), 2 of whom had a subsequent infection resulting in an alveolar abscess that necessitated extraction of the tooth-like structures. Curettage of the socket was therefore suggested following the extraction of natal and neonatal teeth, in order to prevent continued development of the cells of the dental papilla. The possibility that the presence of these teeth might be associated with other abnormalities was also mentioned. The authors concluded that these teeth should not be extracted without sound justification, because the early mobility often resolves within a month, permitting the tooth to be retained until it exfoliates naturally [King and Lee, 1989].

In a private maternity hospital in Kuala Lumpur, 4 out of 9,600 infants appeared to have natal and neonatal teeth [Rusmah, 1991]. In three of these cases, natal or neonatal teeth were located in the mandibular incisor region. One of them had another tooth erupting adjacent to the erupted natal tooth within three weeks from birth. A fourth infant, a female, had a palpable unerupted tooth in the mandibular incisor region at birth which revealed into the oral cavity on the 26th day. Two teeth were not stable in the alveolus and therefore were extracted. After a radiographic evaluation, all four natal and neonatal teeth were found to be part of the primary dentition [Rusmah, 1991].

At the Queen Elizabeth Hospital, cases of 27 natal teeth in 48 newborn infants were reviewed, between January 1984 and December 1988 [To, 1991]. All natal teeth were located in the mandibular central incisor area. Extraction was the treatment in 32 children due to excessive mobility (29 teeth) and laceration of the tongue (3 teeth), while 16 teeth remained in the oral cavity. The cases were examined 1 day after the initial evaluation, and then after 1 week, 1 month and at 6 month intervals. Re-examination periods ranged from 6 months to 7 years.

At the Hospital for Research and Rehabilitation of Cleft Lip and Palate in Sao Paulo, Brasil, in a group of 1,019 infants, 14 patients with complete unilateral and 33 with bilateral cleft lip and palate had natal or neonatal teeth in their oral cavity [De Almeida and Gomide, 1996]. These infants were less than 3 months old and had not undergone surgery for their condition. The authors were not always capable of identifying from the records whether these teeth were natal or neonatal, nor was a radiographic examination possible. All teeth were extracted because of their excessive mobility and their place in the cleft [De Almeida and Gomide, 1996].

A retrospective study reported 15 patients with 17 natal and neonatal teeth [Basavanthappa et al., 2011]. Of these teeth, 16 were located in the mandibular central incisor area and only 1 in the maxillary incisor area. Three cases were related to enamel hypoplasia, 3 cases to Riga-Fede disease (soft tissue ulceration), 1 case to gingival hyperplasia and 1 case concerned a patient with cleft lip and palate. Radiographic evaluation was performed on all teeth and revealed that all of them were supernumerary. Extraction was the given treatment in all cases due to excessive mobility and in 2 cases a prophylactic dose of Vitamin K was administrated [Basavanthappa et al., 2011].

All the above findings are summarised in Table 3.

**Discussion**

The prevalence studies’ results range from close to 0 to 1:10. The prevalence of natal teeth is easier to determine whereas the prevalence of neonatal teeth is more difficult because of the need of a 30-day follow-

**TABLE 3** Management of natal and neonatal teeth.

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Infants</th>
<th>Natal teeth</th>
<th>Neonatal teeth</th>
<th>Supernumerary teeth</th>
<th>Radiographic examination</th>
<th>Extracted teeth</th>
<th>Preserved teeth</th>
</tr>
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<tr>
<td>Allwright, 1958</td>
<td>28</td>
<td>16</td>
<td>24</td>
<td>2</td>
<td>34 teeth</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td>Gordon and Langley, 1970</td>
<td>4</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>3 teeth</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Kates et al., 1984</td>
<td>38</td>
<td>40</td>
<td>21</td>
<td>3</td>
<td>NS**</td>
<td>29</td>
<td>21</td>
</tr>
<tr>
<td>King and Lee, 1989</td>
<td>44</td>
<td>26</td>
<td>33</td>
<td>0</td>
<td>NS**</td>
<td>59 teeth</td>
<td>25</td>
</tr>
<tr>
<td>Rusmah, 1991</td>
<td>4</td>
<td>NS**</td>
<td>NS**</td>
<td>0</td>
<td>4 teeth</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>To, 1991</td>
<td>48</td>
<td>72</td>
<td>0</td>
<td>2</td>
<td>0 teeth</td>
<td>32</td>
<td>16</td>
</tr>
<tr>
<td>De Almeida and Gomide, 1996</td>
<td>1019*</td>
<td>NS**</td>
<td>NS**</td>
<td>0</td>
<td>0 teeth</td>
<td>47 infants</td>
<td>0</td>
</tr>
<tr>
<td>Basavanthappa et al., 2011</td>
<td>15</td>
<td>NS**</td>
<td>NS**</td>
<td>17</td>
<td>17 teeth</td>
<td>17</td>
<td>17</td>
</tr>
</tbody>
</table>

* 692 with completed unilateral cleft lip and palate and 327 with bilateral cleft lip and palate
** not specified
up after the infants have left the hospital. There is also controversy regarding the results about the ratio between male and female infants with natal and neonatal teeth. The studies reviewed in this article have differing results due to different methods used but also it is possible that the results show a predilection among certain ethnic groups, such as Inuit and disorders, as in cleft lip and palate. The different organisation of each study leads to difficulty in comparing their results. For example, with some authors, diagnostic criteria are not stated for natal and neonatal teeth, while criteria differ in many other studies. Another fact that may also contribute to differing results is that in retrospective analyses of hospital records the accuracy depends on the diligence of past employees of the hospital. Also, many articles do not identify the person who performed the examination, and in other articles different medical specialties or even people with no medical training performed the examination or interviews of the subjects. Another fact that contributes to the difficulty of comparing the results of these studies is that many authors do not discriminate between natal and neonatal teeth and give ratios for both conditions together. Moreover, some authors predetermine any inclusion criteria in regards to the subject’s health or history while others include all subjects without any criteria.

Regarding the management of natal and neonatal teeth, there is an agreement among authors in clinical studies that natal and neonatal teeth should be retained because they are most frequently teeth of the normal primary dentition. An exception is made for those that appear to be excessively mobile and should be extracted. It should be mentioned at this point, that none of the writers cited above mentioned any case of natal and neonatal teeth to be swallowed or aspirated. Also it is stated that in order to avoid sublingual ulceration of the tongue and laceration of the mother’s nipple, sharp edges of natal and neonatal teeth without excessive mobility should be trimmed. A dental radiograph should be obtained, when possible, in order to determine whether the teeth are supernumerary but also to determine the state of the root formation of the teeth. The cases of natal and neonatal teeth should follow a re-examination program in order to observe the mobility, shape and colour of these teeth and any complication they might cause. Although there is an agreement among authors about the above, comparing the results of these studies is difficult because not all have the same guidelines for the diagnosis and treatment of natal and neonatal teeth. Diagnosis about teeth being part of the primary dentition or supernumerary was not always based on radiographic examination and also a re-evaluation system was not conducted in all cases in order to be certain of any possible complications or the results of their treatment. Case reports, although excluded from this study, have interesting new ways of treatment such as changing the way children with natal and neonatal teeth are fed or covering the incisor edges of the natal or neonatal teeth with resin which require thorough scientific verification.

Conclusion

The prevalence of natal teeth needs more research in order to be more precise, but there seems to be a higher incidence in certain ethnic groups and certain health conditions. More research needs to be done in a wider spread of countries to obtain a broader view about the possible tendency of certain ethnic groups towards natal and neonatal teeth. Neonatal teeth are more difficult to monitor than natal teeth, unless they erupt before the newborn is discharged from the maternity unit. Thus the data may be a very significant underestimation. In order to have a precise measure of the prevalence of neonatal teeth, studies focused on the first 30 days of neonates should be organised. In the field of management of natal teeth, prospective, short follow-up studies should be carried out in order for evidence-based treatment to be given to patients.

References