ABSTRACT

Objective: to identify factors associated with adherence to breastfeeding in infants with cleft lip and/or palate. Method: quantitative, cross-sectional study with 121 caregivers of children with cleft lip and/or palate. Data collection was carried out during the preoperative nursing visit of queioplasty and/or palatoplasty. The parents/guardians answered a questionnaire regarding the receipt of information about breastfeeding received in the pre- and postnatal care. For the statistical analysis, the chi-square test was used, with significance of 5%. Results: exclusive breastfeeding was observed in 31% (n = 38) of infants. Of these, 63% (n = 24) were breastfed for one month. Among the factors for non-adherence to breastfeeding, ineffective sucking (p = 0.01), while receiving prenatal guidelines favored its adherence (p = 0.042). Conclusion: few infants were breastfed exclusively and for shorter time than recommended. The complexity of the cleft, evidenced by sucking deficit, negatively influenced adherence to breastfeeding, while the receipt of information by prenatal health professionals influenced positively. Descritores: Breast Feeding; Nursing Care; Cleft Lip; Cleft Palate; Bottle Feeding; Nursing.

RESUMO

Objetivo: identificar fatores associados à adesão ao aleitamento materno em lactentes com fissura de lábio e/ou palato. Método: estudo quantitativo, transversal, com 121 cuidadores de crianças com fissura de lábio e/ou palato. A coleta de dados foi realizada durante a consulta de Enfermagem pré-operatória de queioplastia e/ou palatoplastia. Os pais/responsáveis responderam a um questionário referente ao recebimento de informações sobre o aleitamento materno recebidas no pré e pós-natal. Para a análise estatística, utilizou-se o teste Qui-quadrado, com significância de 5%. Resultados: o aleitamento materno exclusivo foi observado em 31% (n=38) dos lactentes. Desses, 63% (n=24) foram amamentados por um mês. Entre os fatores para a não adesão ao aleitamento materno prevaliu a sucção ineficaz (n=45, 37%). Possuir fissura de lábio e palato influenciou negativamente a prática de aleitamento materno (p=0,01), enquanto receber orientações no pré-natal favoreceu a sua adesão (p=0,042). Conclusão: poucos lactentes foram amamentados exclusivamente e por tempo acuado do recomendado. A complexidade da fissura, evidenciada pelo déficit de sucção, influenciou negativamente a adesão ao aleitamento materno, enquanto o recebimento de informações por profissionais de saúde no pré-natal influenciou positivamente. Descritores: Aleitamento Materno; Cuidados de Enfermagem; Fissura Labial; Fissura Palatina; Alimentação Artificial; Enfermaria.
INTRODUCTION

The feeding of newborns and infants with cleft lip and/or oral palate is defended from birth considering that the sucking and swallowing reflexes are preserved. However, they may present choking, impaired swallowing, nasal reflux of the food, and difficulty in forming intraoral pressure, which is necessary for effective sucking, making feeding difficult. These changes are directly related to the anatomical complexity of the cleft.1-3

Breast milk is indicated as an ideal food for newborns and infants. Among the various benefits of breastfeeding are nutritional support, ease of digestion and absorption, immunological properties, protective effect on allergies and improvement over adaptation to other foods. It is still economical and has a lower risk of contamination in relation to the use of bottles and nozzles.4

In newborns and infants with cleft lip and/or palate, in addition to the benefits already mentioned, the act of breastfeeding stimulates a continuous physical exercise, which denotes the muscular and bone development of the mouth, providing the harmonious facial development, which in turn, contributes to the maturation of the stomatognathic system. These factors, in combination, are considered to be facilitators in the postoperative recovery related to surgical corrections of the malformation.5 The strengthening of the bond between the mother and the child is also added, given the wide range of feelings and reactions negative effects that the mother and the family present before the birth of a child different from the one imagined.6

Breastfeeding is prevalent in infants with lower anatomical complexity clefts.7-8 However, more complex clefts do not totally counterindicate breastfeeding.9

Strategies developed by parents and caregivers to feed children with clefts have been evidenced by demonstrating adaptive processes in the face of feeding problems.10 However, the rates of exclusive breastfeeding in this population fall short of what is recommended.7,9

In this context, this study presents a situational diagnosis about breastfeeding in infants with cleft lip and/or palate. It was also sought to characterize the infants as for the classification of the cleft (of lip and/or palate).

METHOD

This is a quantitative, exploratory and descriptive cross-sectional study carried out in a public tertiary hospital located in the interior of São Paulo, Brazil.

The population was composed of parents or caregivers of children affected by cleft lip and/or palate, who were accompanying their children during the Nursing consultation preparatory to the surgery of queiloplasty and/or palatoplasty.

For the sample calculation, a population of 240 infants was considered (based on the monthly average of visits and in the data collection period), reliability of 95% and expected proportion of 20%.1 It was estimated that 121 participants, who composed the sample. Parents or caregivers, older than 18 years of age were included in infants with cleft lip and/or palate, with no associated comorbidities, clinical or genetic, and born at full term.

The research began after the approval of the Committee of Ethics in Research involving Human Subjects of the Institution, through the opinion 665.633 and CAAE 30288214.1.0000.5441. All participants formalized their participation by signing the Term of Free and Informed Consent, obeying the precepts of Resolution 466/2012.

Data collection occurred between January and April 2015, during the preoperative Nursing consultation for the surgery of queiloplasty and/or palatoplasty. A structured interview was conducted through the application of a questionnaire prepared by the authors with data regarding the receipt of information about breastfeeding received in the pre- and postnatal period, adherence to exclusive and non exclusive breastfeeding, breastfeeding time, as well as the factors associated with the non adherence of this practice. It was also sought to characterize the infants as for the classification of the cleft (of lip and/or palate).

The definitions of breastfeeding used in this study included: breastfeeding - the child receives breastmilk associated or not with other milks, liquids, solid or semi-solid foods; exclusive breastfeeding - the infant is exclusively fed with human milk, directly from the breast or milk, and does not receive any other food or liquids. The definite period of breastfeeding was defined as the total time of breastfeeding in the first year of life, accompanied by breast stimulation as necessary.11-12

Breastfeeding in infants with labiopalatine...
other liquid or solid, except for vitamins, mineral supplements or medications.4

To analyze the association between exclusive breastfeeding and the classification of the cleft and the training received in the pre- and postnatal period, the Chi-square test was used. We considered 5% (p ≤0.05) as a statistically significant difference.

RESULTS

One hundred and twenty-one mothers of children with clefts, with a predominance of 21 to 30 years (n = 65, 54%), with stable union (n = 58, 48%), low social class (50%) and with complete secondary education (n = 43, 36%) participated in this study.

The bottle prevailed as a utensil used to breastfeed infants who could not breastfeed (n = 69, 57%). In the majority of cases, mothers attempted to breastfeed the infant at the breast (n = 111, 92%), but 71% (n = 86) were unsuccessful.

It was observed that 31% (n = 38) of the infants were exclusively breastfed. Of these, 25% (n = 10), directly at the breast. The mean duration of exclusive breastfeeding was 75 (±13) days. Among the reasons reported for non-adherence to breastfeeding, ineffective sucking (n = 45, 37%) prevailed, according to table 1.

In relation to the characterization of infants regarding the classification of the cleft, the lip and palate predominated (n = 50, 41%). There was a positive association between being submitted to less complex clefts and breastfeeding (p <0.001), that is, the incidence of breastfeeding in infants with cleft lip was greater (n = 25, 83%) when compared to lip and palate (n = 12, 24%) and isolated palatine (n = 7, 17%), according to table 2.

When exclusive breastfeeding was associated with guidelines received during prenatal care, a positive association was observed (p = 0.042), that is, the incidence of breastfeeding was significantly higher in infants whose mothers received prenatal orientations, according to table 3. On the other hand, the guidelines received during the postnatal period (maternity) did not significantly influence adherence to breastfeeding (p = 0.883), according to table 4.

<table>
<thead>
<tr>
<th>Cleft Classification</th>
<th>Breastfed infants</th>
<th>Non-breastfed infants</th>
<th>Total</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleft lip</td>
<td>25 (83%)</td>
<td>5 (17%)</td>
<td>30 (25%)</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Cleft palate</td>
<td>7 (17%)</td>
<td>34 (83%)</td>
<td>41 (34%)</td>
<td></td>
</tr>
<tr>
<td>Cleft lip and palate</td>
<td>12 (24%)</td>
<td>38 (76%)</td>
<td>50 (41%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>44 (36%)</td>
<td>77 (64%)</td>
<td>121 (100%)</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Reasons attributed by mothers to discontinue breastfeeding in children with cleft lip and/or palate. Bauru (SP), Brazil, 2015.

Table 2. Association between exclusive breastfeeding and classification of the cleft. Bauru (SP), Brazil, 2015.
In this study, the importance of guidance on pre-natal breastfeeding in prenatal care was evidenced. Good results in relation to breastfeeding and feeding practices have been linked to the guidance provided by trained professionals as early as possible.\textsuperscript{5,11}

Prenatal care is indicated as a propitious time to provide guidelines, which should be presented in a clear and objective way.\textsuperscript{10,1} However, there is a shortage of trained professionals who promote adequate guidelines and training.\textsuperscript{7,12,13}

Regarding the method used for the supply of milk to infants not breastfed in the mother's womb, the findings of this study corroborate other studies that show the use of the bottle with orthodontic nozzle.\textsuperscript{1} On the other hand, the study pointed to a predominance of the spoon, although followed by the baby bottle.\textsuperscript{14}

It is emphasized that, in the impossibility of direct breastfeeding from the breast, the mother's milk should be milked and offered with other utensils. However, feeding methods should be simple and customary.\textsuperscript{14,5}

The most frequent reason, as pointed out by the mothers, for non-adherence to breastfeeding was related to ineffective sucking. Similar results were observed in other investigations.\textsuperscript{5,11} The difficulty of feeding infants with clefts arises soon after birth, mainly associated with losses related to correct nipple suction and hold due to anatomical alteration. Other difficulties can be observed. Among them, gagging and nasal reflux of the food.\textsuperscript{9,13} The difficulty is greater in more complex clefts.\textsuperscript{5,14}

Although, in this study, guidelines received at the maternity did not significantly influence adherence to breastfeeding, the literature points out that this is one of the main difficulties with the practice of breastfeeding in children with clefts.\textsuperscript{1,13} In this context, research indicated that, although 72% of the mothers had received guidelines on feeding children with cleft lip and palate in the hospital environment, other ancillary resources were necessary, including individual adaptations such as positioning.\textsuperscript{12}

Different positions and methods are presented respecting the individuality that, in some situations, emerge from the needs and experiences of the mothers and not necessarily from the orientation of professionals.\textsuperscript{10} However, it is emphasized on the necessity of raising the head in relation to the trunk considering deficient protection of the auditory tube in infants with clefts, which favors the development of repetitive otitis.\textsuperscript{9}

The lack of knowledge of professionals is pointed out as an important limitation for the success of breastfeeding in infants with clefts.\textsuperscript{7,12,13} A study pointed to the benefits related to the implementation of some strategies, such as the formation of groups of specialists to accompany patients and their families prospectively.\textsuperscript{16}

The positive association between exclusive breastfeeding and cleft lip is also observed, according to the literature, which links the success of breastfeeding to less

<table>
<thead>
<tr>
<th>Received guidance</th>
<th>Breastfed infants</th>
<th>Non-breastfed infants</th>
<th>Total</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>33 (27%)</td>
<td>42 (35%)</td>
<td>75 (62%)</td>
<td>0</td>
</tr>
<tr>
<td>No</td>
<td>11 (9%)</td>
<td>35 (29%)</td>
<td>46 (38%)</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>44 (36%)</td>
<td>77 (64%)</td>
<td>121 (100%)</td>
<td>0</td>
</tr>
</tbody>
</table>

| Chi-square test | Statistical significance (p<0.05) |

<p>| Table 4. Association between exclusive breastfeeding and receipt of postnatal orientation (maternity). Bauru (SP), Brazil, 2015. |</p>
<table>
<thead>
<tr>
<th>Received guidance</th>
<th>Breastfed infants</th>
<th>Non-breastfed infants</th>
<th>Total</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>37 (31%)</td>
<td>67 (55%)</td>
<td>104 (86%)</td>
<td>0.863</td>
</tr>
<tr>
<td>No</td>
<td>07 (6%)</td>
<td>10 (8%)</td>
<td>17 (14%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>44 (37%)</td>
<td>77 (63%)</td>
<td>121 (100%)</td>
<td></td>
</tr>
</tbody>
</table>

DISCUSSION

In this study, the importance of guidance on pre-natal breastfeeding in prenatal care was evidenced. Good results in relation to breastfeeding and feeding practices have been linked to the guidance provided by trained professionals as early as possible.\textsuperscript{5,11}

Prenatal care is indicated as a propitious time to provide guidelines, which should be presented in a clear and objective way.\textsuperscript{10,1} However, there is a shortage of trained professionals who promote adequate guidelines and training.\textsuperscript{7,12,13}

Regarding the method used for the supply of milk to infants not breastfed in the mother's womb, the findings of this study corroborate other studies that show the use of the bottle with orthodontic nozzle.\textsuperscript{1} On the other hand, the study pointed to a predominance of the spoon, although followed by the baby bottle.\textsuperscript{14}

It is emphasized that, in the impossibility of direct breastfeeding from the breast, the mother's milk should be milked and offered with other utensils. However, feeding methods should be simple and customary.\textsuperscript{14,5}

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Although, in this study, guidelines received at the maternity did not significantly influence adherence to breastfeeding, the literature points out that this is one of the main difficulties with the practice of breastfeeding in children with clefts.\textsuperscript{1,13} In this context, research indicated that, although 72% of the mothers had received guidelines on feeding children with cleft lip and palate in the hospital environment, other ancillary resources were necessary, including individual adaptations such as positioning.\textsuperscript{12}

Different positions and methods are presented respecting the individuality that, in some situations, emerge from the needs and experiences of the mothers and not necessarily from the orientation of professionals.\textsuperscript{10} However, it is emphasized on the necessity of raising the head in relation to the trunk considering deficient protection of the auditory tube in infants with clefts, which favors the development of repetitive otitis.\textsuperscript{9}

The lack of knowledge of professionals is pointed out as an important limitation for the success of breastfeeding in infants with clefts.\textsuperscript{7,12,13} A study pointed to the benefits related to the implementation of some strategies, such as the formation of groups of specialists to accompany patients and their families prospectively.\textsuperscript{16}

The positive association between exclusive breastfeeding and cleft lip is also observed, according to the literature, which links the success of breastfeeding to less
complex cracks, mainly because they maintain an intraoral pressure that favors effective suctioning.\(^1,8,17\)

The percentage of exclusive breastfeeding in this study was 31%, well below that reported in the literature.\(^7,17\) A Scottish study reported a percentage of exclusive breastfeeding in infants with a cleft of 54% at birth.\(^7\) On the other hand, another investigation identified that the percentage of exclusive breastfeeding was approximately 70%.\(^16\) This finding reflects the many challenges faced by health professionals regarding breastfeeding in infants with clefts. The implementation of public policies to encourage this practice in this population and the training of professionals from different fields of action, especially public and hospital health, are necessary and urgent.

However, although the percentage of exclusive breastfeeding in this study was low, the mean duration of breastfeeding was 75 days, which is considered to be high compared to the literature.\(^18\) However, this time frame is shorter than recommended for breastfeeding.\(^4\)

When considering food difficulties in children with cleft lip and palate, including lip seal deficiency and, especially, weak sucking, it is essential to monitor weight gain and development.\(^17\)

A recent publication pointed to the association between the complexity of the cleft and the need for evaluation of weight gain, in addition to the follow-up performed by experienced and trained nurses.\(^19\) Inefficient suctioning in infants with cleft is related to a lack of coordination between suction, respiration and swallowing resulting in gagging, fatigue and low ingestion, these etiological factors to malnutrition.\(^20\)

The fact that this study is based on previous experiences of mothers, therefore, may be considered a limitation. Therefore, prospective studies, which verify the efficacy of interventions aimed at promoting breastfeeding in infants with different types of clefts, are encouraged.

It is believed that the main contribution of this study was related in the identification of the reduced percentage of exclusively breastfed infants, pointing out the challenge of health professionals regarding the planning and implementation of strategies to promote this practice in this specific population.

Emphasis is given to the need to disseminate knowledge about clefts in the academic community, including undergraduate and specialization courses. It is also necessary to develop public policies for this purpose, in addition to the training of pediatrics and childcare professionals.

## CONCLUSION

It was evidenced that few infants were breastfed exclusively and for a period shorter than recommended. The complexity of the cleft, evidenced by the sucking deficit, had a negative influence on the adherence to breastfeeding, whereas the receipt of training by health professionals during the prenatal period influenced positively, that is, the success of this practice is directly related to the complexity of the cleft, factor, but also to the receipt of guidelines in prenatal care indicating that this is an area of intervention to be explored.

## REFERENCES


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