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Results of Rooming-in After Caesarean Section in Breastfeeding: A Cohort Study

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ABSTRACT

Introduction: at the beginning and establishment of breastfeeding, adequate care routines are essential, such as its early initiation and skin-to-skin contact, which implies the need to facilitate the joint accommodation of the mother with the newborn in the immediate postpartum period, regardless of the type of delivery.

Objective: to analyze the effects of mother and newborn rooming-in after a cesarean section on breastfeeding rates at hospital discharge and its maintenance up to two years later.

Method: A prospective cohort study was conducted with a random sample of 146 women and their newborns, who were followed up for two years. The characteristic of cohort A was rooming-in of mother and newborn after cesarean section, whereas the characteristic of cohort B was separation of mother and newborn after cesarean section.

Results: cohort A was made up of 67 mothers, 58 of whom were able to do skin-to-skin care after the cesarean section and 46 started breastfeeding during that period. Cohort B was made up of 79 mothers and none could make skin-to-skin contact or initiate breastfeeding.

Conclusions: skin-to-skin contact after caesarean section, as well as avoiding the administration of supplements during this period, has a beneficial effect on the initiation and maintenance of breastfeeding; and this is possible thanks to joint accommodation.

KEYWORDS: Rooming-in Care, Breastfeeding, Cesarean Section, Cohort Studies.

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INTRODUCTION

The World Health Organization (WHO), the United Nations Children's Fund (UNICEF) and the Spanish Association of Pediatrics (AEP), among other corporations, recommend feeding the newborn with exclusive breastfeeding during the first 6 months. and in a complementary way up to two years of life, due to its multiple benefits (1–4).

Following this recommendation based on solid scientific evidence, the WHO considers that the initiation of breastfeeding within the first hour of life is the best recommended practice, so the ideal time for this is the two-hour period that includes the immediate postpartum and in which the newborn is more reactive (5–7).

In the initiation and establishment of breastfeeding, adequate care routines are essential, such as early initiation and skin-to-skin contact, which implies the need to facilitate the joint accommodation of the mother with the newborn in the immediate postpartum period, regardless of of the type of delivery (2,8,9). Understanding the factors that possibly influence early initiation of breastfeeding, such as rooming-in of mother and newborn after delivery, is important for designing more effective strategies, because early initiation of breastfeeding is a consistently significant predictor of a longer duration of exclusive breastfeeding (3,10).

Early cessation of breastfeeding has become a global phenomenon, with only 38% of babies worldwide being exclusively breastfed until four months of age (4,11), and 25% in the case of our country at 6 months of age (12).

Delay in starting and abandoning breastfeeding is related to cesarean section. This is because in most hospitals the mother and child are separated during the recovery time after cesarean section, which can last several hours (2,7,12–15).

In efforts to increase exclusive breastfeeding rates among women after cesarean delivery, factors that hinder breastfeeding must first be identified. A good understanding of the factors that impede breastfeeding among women after cesarean delivery will facilitate the development of effective strategic plans that provide breastfeeding education and support for these women to initiate and continue breastfeeding (7,10, 16).

In our country, the Clinical Practice Guide for Normal Childbirth Care of the Ministry of Health, states that there is good quality evidence to affirm that skin-to-skin contact of the newborn with the mother is beneficial to increase breastfeeding time. Therefore, it is recommended to start it immediately after birth and avoid separation during the first hour of life and until the first feeding has finished (11,17,18). Additionally, although less researched, the importance of early contact between mother and newborn in promoting a positive birth experience for the mother has been increasingly recognized (19–22).

In our case, at the Salamanca University Care Complex (CAUSA), the separation of the mother and the newborn has been a common practice that has been modified in recent years, since it is in cases of cesarean delivery, where the protection, promotion and support of breastfeeding is a very important task for health professionals during the immediate postpartum period (3,5,9).

Therefore, it is important to study the evolution of breastfeeding rates to identify whether the objectives are being met in relation to breastfeeding promotion interventions and to determine the factors that influence breastfeeding practices (4). The objective of this study is to analyze the effects of rooming-in for mother and newborn after a cesarean delivery on breastfeeding rates at hospital discharge and its maintenance up to two years later.

PATIENTS AND METHOD

A prospective cohort study was carried out at the University Hospital of Salamanca (Spain), under the approval of the corresponding Ethics and Research Committee. The characteristic or exposure factor that defines cohort A is the rooming-in of mother and newborn after birth by cesarean section, while the defining characteristic of cohort B is the absence of rooming-in, and therefore the separation of mother and newborn after surgery.

The target population of this study was made up of women who had had a cesarean delivery at the University Hospital of Salamanca and who wanted to feed their children through exclusive breastfeeding.

The study population included those subjects who met the inclusion and exclusion criteria described below:

Inclusion criteria:

• Delivery by cesarean section: it was necessary for the birth to occur by cesarean section in order to study the influence of rooming-in after cesarean section on breastfeeding, since in other types of birth such as eutocic vaginal or instrumental vaginal delivery, rooming-in constitutes an usual practice and separation between mother and newborn is not done routinely. The type of cesarean section or the reason for performing it was not taken into account, since these variables did not influence whether or not subsequent rooming-in was practiced.

• Primiparous woman: it was decided to include only primiparous women to prevent them from having previous experience with breastfeeding, whether positive or negative. Those mothers with previous children may have a better or worse predisposition to feeding their newborns with breast milk based on their past experiences, which can considerably influence the results studied.

• Full-term gestation: it was taken into consideration that the newborns had a gestational age between 37 and 42 weeks of gestation at the time of the cesarean section, since premature or post-term newborns may require hospital admission and specialized care that requires to apply treatments that influence the results studied.

• Desire for exclusive breastfeeding: in order to study the influence of rooming-in on breastfeeding, it was necessary to incorporate into the study those women who wanted this type of feeding for their children.

• Consent and desire to participate in the study.

Exclusion criteria:

• Multiple gestation: it was decided to exclude women with multiple births because at the time of data collection, having more than one newborn for each mother may lead to errors in measurement and data collection in reference to the study variables.

• Difficulty understanding the language (Spanish): those women who did not understand the language correctly were excluded to avoid errors in the authorization of informed consent and data collection.

• Absence of any of the variables collected in the study: in those cases in which any of the study variables could not be collected correctly or the data collected were incomplete, it was decided that they would be excluded from the study.

To calculate the sample size, a confidence level of 95% and a margin of error of 5% was applied to a total theoretical population of 232 women, based on the study population that met the selection criteria from previous years according to the consultation of historical data, thus obtaining a total of 146 participants. Finally, the sample was selected after a systematic random sampling process, in such a way that the first subject on the list who met the selection criteria was recruited and then the sampling constant k=3 was applied until the sample was obtained.

The selection of participants began on January 1, 2018 and ended on December 15, 2020, through consultation of the delivery book of the delivery room service. Once the study subjects were selected, the objective and methodology of the study were informed. same, and if they agreed to participate, the informed consent was signed.

The contact information of each participant and the variables of maternal age, gestational age, indication for cesarean section, post-surgical recovery location, skin-to-skin contact, administration of supplements to the newborn in the first hours of life were extracted from the duck book. and newborn data such as sex and weight. To collect data regarding the type of breastfeeding at discharge, the clinical history of each woman was consulted and to determine the degree of maternal satisfaction, an "ad hoc" questionnaire was administered prior to discharge, in which the degree of satisfaction was measured qualitatively. ordinal with 5 degrees of satisfaction. Finally, to know the evolution and type of breastfeeding during the following two years, a series of telephone consultations were scheduled on a monthly basis during the first six months and then on a semiannual basis until two years after the cesarean section. In cases of abandonment of breastfeeding, artificial breastfeeding is assumed, since until the infant is two years old, milk (whether of human origin or not) constitutes the main diet and the rest of the foods constitute the supplementary feeding. Therefore, all mothers who decided to abandon breastfeeding continued feeding their children with artificial formula milk. After this two-year follow-up, the collection of all data was completed on December 22, 2022.

The data were analyzed with the SPSS statistical analysis software through descriptive statistics and contingency tables for qualitative variables

RESULTS

The sample is made up of 146 mothers with a mean age of 33.57 years and a standard deviation of 5.47 with ages between 18 and 48 years. The mean gestational age was 39 weeks and the reasons for having a cesarean delivery are described in the following graph (Figure 1).

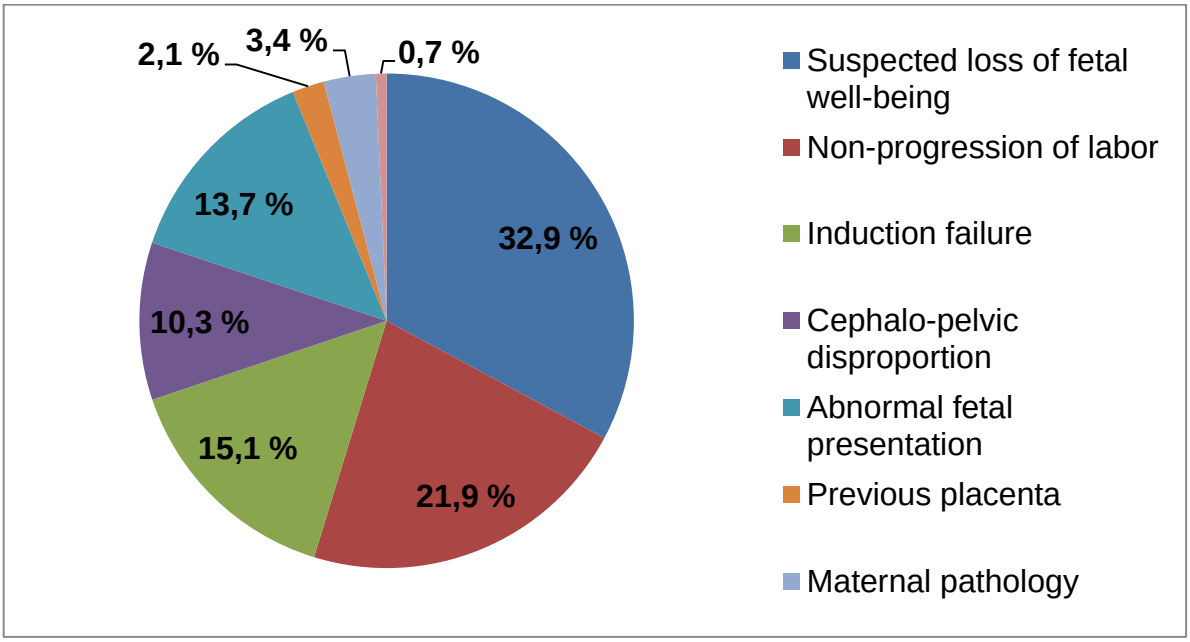

Figure 1. Indication or reason for cesarean section.

In the newborns, 52.1% were men (n=76) and 47.9% were women (n=70), with an average weight of 3.288 grams.

Cohort A is made up of a total of 67 mothers and their newborns (45.9%). Of all the women in cohort A, 58 of them had skin-to-skin contact within two hours after the cesarean section, of which 46 initiated breastfeeding during that period. Of the 9 women who did not have skin-to-skin contact, none began breastfeeding during that period.

Cohort B is made up of a total of 79 mothers and their newborns (54.1%). None of the women belonging to cohort B were able to have skin-to-skin contact due to the separation between mother and newborn and therefore could not initiate breastfeeding in the first two hours of life.

86.2% of women who managed to make skin-to-skin contact did not require artificial breastfeeding supplements compared to 58% of women who could not make skin-to-skin contact.

The degree of general maternal satisfaction during the immediate postpartum period after cesarean section was higher in mothers in cohort A, compared to mothers in cohort B (Figure 2).

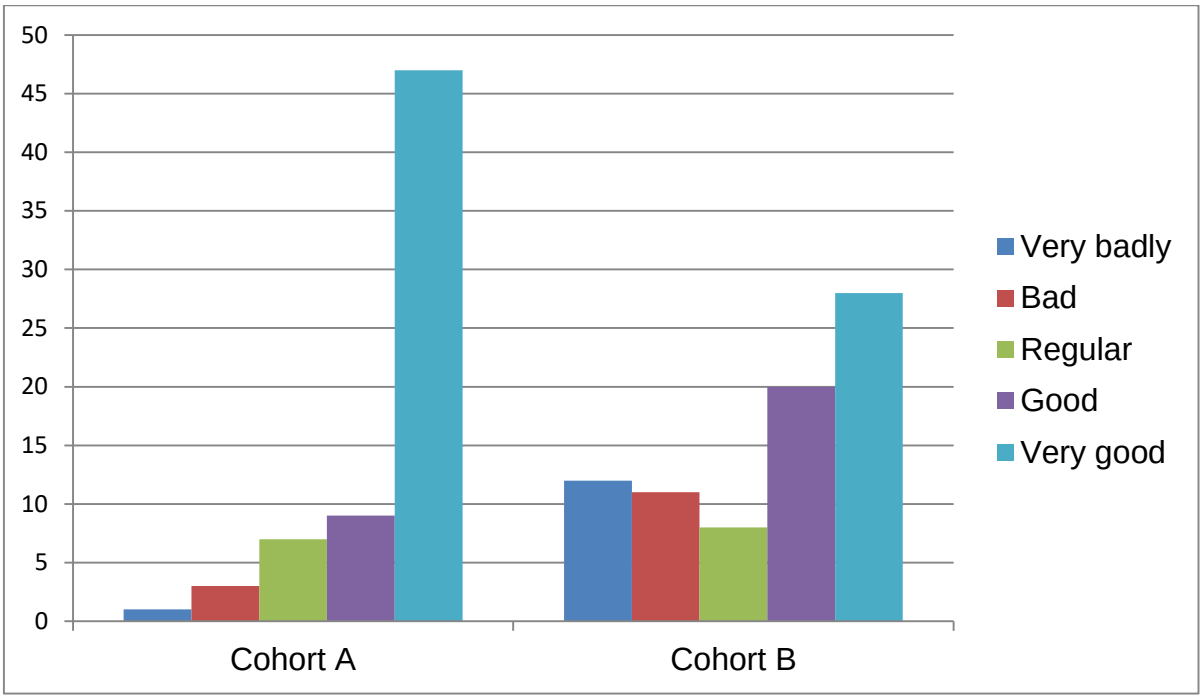

Figure 2. General maternal satisfaction.

Breastfeeding rates from hospital discharge to two years after cesarean section evolve over time according to the following graphs, which reflect breastfeeding rates in the total sample (Figure 3), as well as in cohort A (Figure 4) and cohort B (Figure 5).

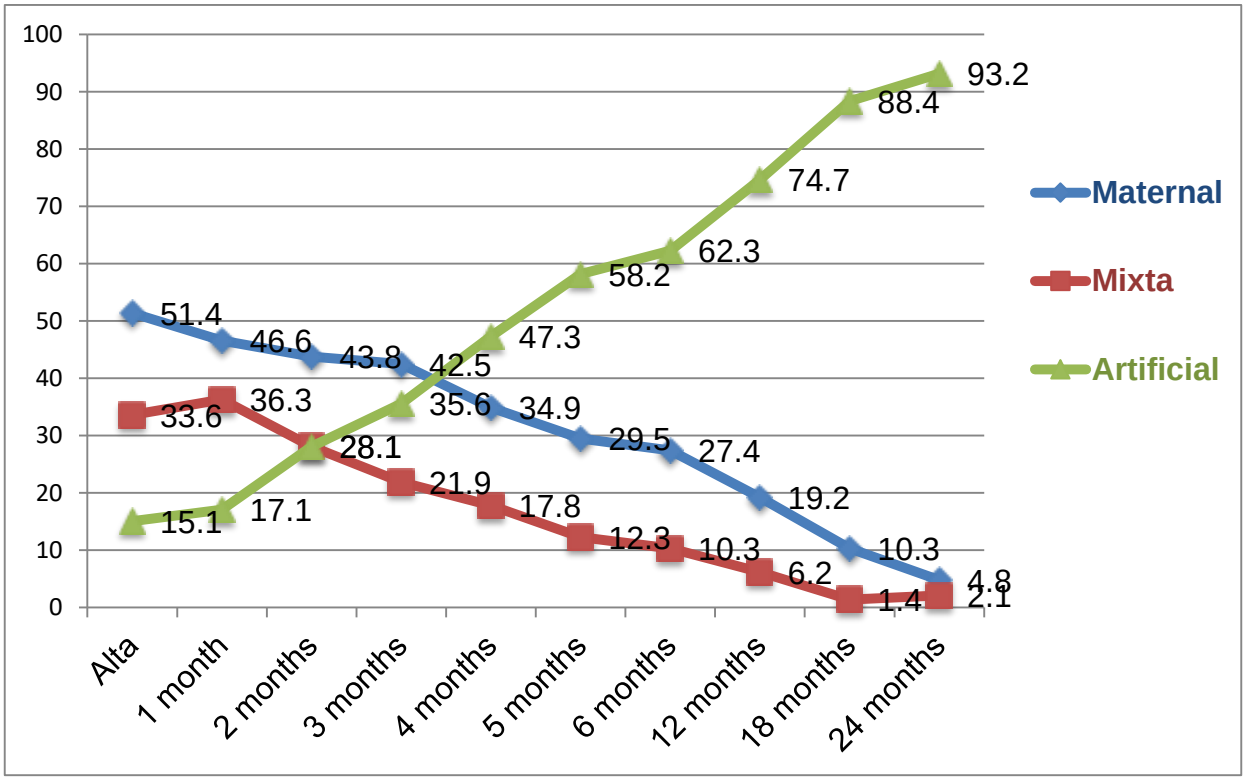

Figure 3. Lactation Rates in the total sample.

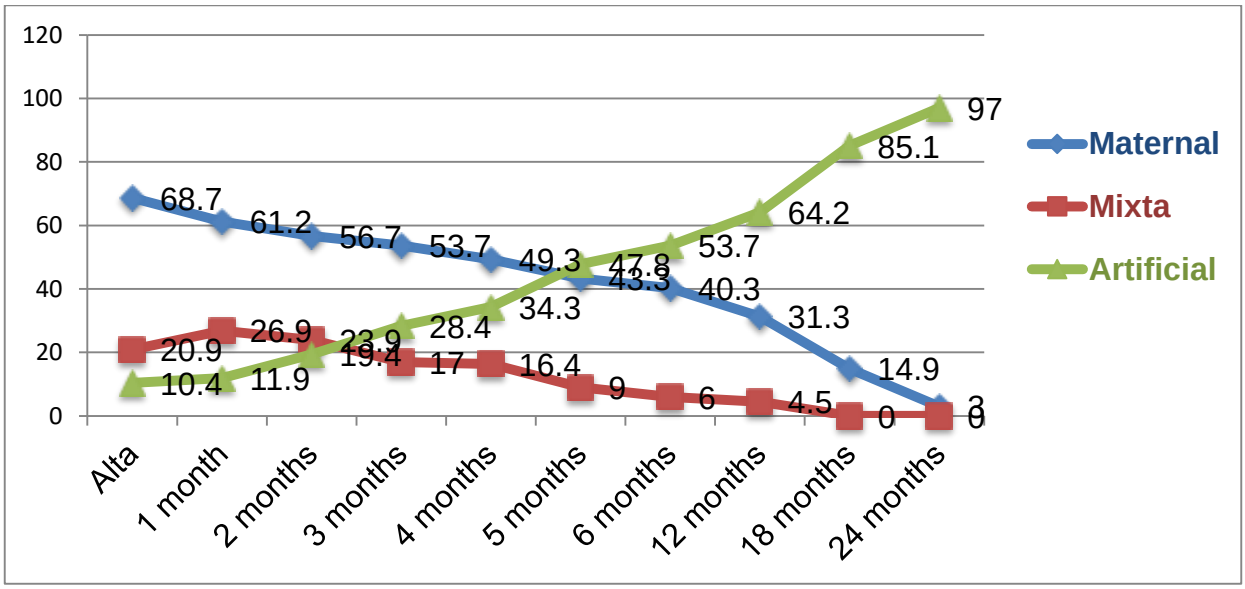

Figure 4. Breastfeeding Rates in Cohort A.

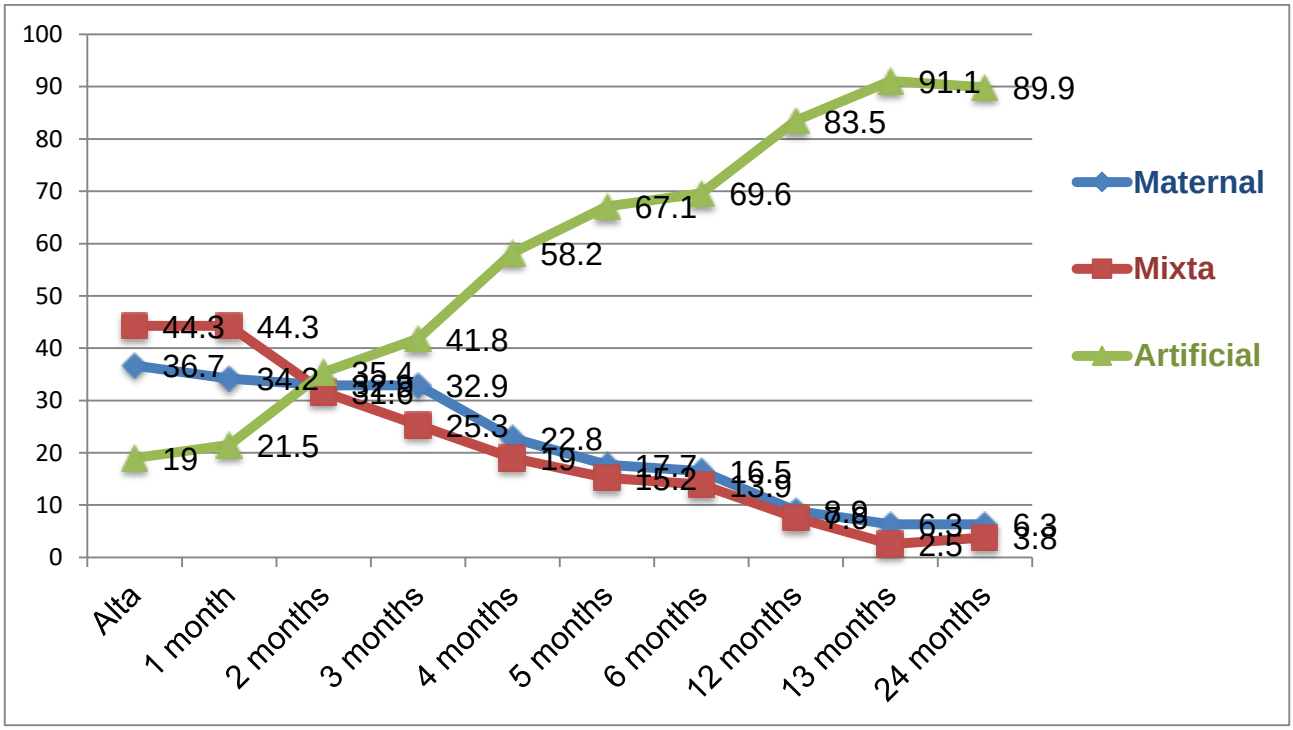

Figure 5. Breastfeeding Rates in Cohort B.

DISCUSSION

According to the results obtained, the main conclusion is that skin-to-skin contact for at least two hours and uninterrupted between mother and newborn after cesarean section, as well as avoiding the administration of artificial formula supplements during this period, has an effect beneficial in the initiation and maintenance of breastfeeding; and this is possible thanks to the joint accommodation in the post-surgical recovery unit of the delivery room.

If we analyze the influence that skin-to-skin contact has on breastfeeding, we see that it significantly favors the maintenance of breastfeeding up to 18 months. In relation to the administration of artificial formula supplements in the first two hours of life, it has been observed that there is a negative influence on the initiation and maintenance of breastfeeding up to 4 months. However, from 5 months onwards, no relationship is established between these variables.

In the case of our study, skin-to-skin contact associated with early initiation of breastfeeding increased breastfeeding rates compared to those mothers who did not make skin-to-skin contact and did not initiate breastfeeding during the immediate postpartum period. . This result coincides with a multitude of similar studies if we take into account an increase in exclusive breastfeeding rates up to 6 months of life of the infant (23,24).

Performing skin-to-skin contact in cesarean sections obtained a large number of benefits compared to a small number of

limitations, which is why it is considered a feasible practice that can be implemented safely after a cesarean section. According to various research, skin-to-skin contact has provided benefits in terms of breastfeeding, thermoregulation, stress levels, pain and glycemia, which is why this practice must be promoted beyond vaginal birth, including it in the field of cesarean section (25).

Furthermore, the mothers' assessment in terms of maternal satisfaction was higher in cases in which they were allowed skin-to-skin contact, as in other studies (18).

A systematic review and meta-analysis of breastfeeding outcomes after cesarean delivery found that breastfeeding initiation rates were significantly lower after cesarean delivery (18,23). Furthermore, breastfeeding and exclusive breastfeeding rates at 6 months were lower among women who had a cesarean delivery compared to vaginal delivery (normal or instrumental) (14,26), which is why it is necessary to implement practices such as skin-to-skin contact and avoiding unnecessary supplementation with formula to improve breastfeeding rates in cesarean sections.

The administration of starter formula milk supplements or artificial breastfeeding during the immediate postpartum period is common practice when the mother and newborn are separated after cesarean section and this separation is expected to last several hours or the newborn requires breast feeding. early under medical prescription (27). In the case of our research, the administration of artificial milk supplements to the newborn after cesarean section increased the rates of artificial breastfeeding and mixed breastfeeding at hospital discharge and its maintenance until 4 months of life of the infant (28).

Regarding the evolution of different types of breastfeeding after hospital discharge, the observed increase in exclusive breastfeeding during recent decades is consistent with global efforts to protect, promote and support this practice, including the implementation of the Code Marketing of Breastmilk Substitutes and interventions within health services and communities, such as the Baby-Friendly Hospital Initiative and guidance to mothers and families on the exclusivity and continuity of breastfeeding (29).

The main strengths of this study have been the random sampling techniques used to avoid selection bias, as well as the reliability of uninterrupted skin-to-skin contact and the initiation of breastfeeding in that period effectively, as it is treated in that period. case of immediate puerperiums carried out in a unit managed by midwives that allowed joint accommodation between mother and newborn.

As limitations of this work, it is worth highlighting the possible obsequiousness bias that may occur when the interviewed subject responds according to what he or she believes the interviewer wants to hear in the case of follow-up telephone consultations.

As new lines of research, it is proposed to study the effect of early skin-to-skin contact, immediately after the cesarean section and carried out in the operating room, since it is a recommended practice and can be achieved through the awareness of all the people involved and simple procedural changes (30).

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