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Breastfeeding practices after caesarean section (C-section) at the Essos Hospital Center

Summary

Background: Exclusive breastfeeding is the gold standard for infant feeding; combined with early breastfeeding, it becomes very beneficial for the child and his mother. However, caesarean section can affect its practice.

Objective: To evaluate breastfeeding practices after caesarean section in the maternity ward of the Essos Hospital Center.

Material and methods: Our retrospective and analytical cross-sectional study went from January 2020 to July 2020. Included in our sample were women who gave live-births by caesarean section at the Essos Hospital Center, whose children were alive. Interviews used a pre-established and pre-tested questionnaire, Data were collected using CSPro software version 7.3.1. The odds ratio with its 95% confidence interval was used to assess the association between the different variables. Any difference was considered statistically significant when the p-value <0.05.

Results: We recruited 70 caesarized women, all the mother-child pairs had been separated, and none of the mothers had breastfed early. Furthermore, 42.9% of lactating women had given the breast between 1 and 24 hours after birth, and 52.9% twenty-four hours later. A statistically significant association existed between the duration of separation and the delay in breastfeeding initiation (duration of separation 24h (OR= 0.07; IC= 0.00-0.42; p=0.016); 48h (OR=0, 02; CI=0.00=0.18; p=0.002); 48h-72h (OR=0.03; CI=0.00-0.28; p=0.007)).

Conclusion: In this population, caesarean section and mother-child separation played a major negative role by delaying the initiation of breastfeeding.

Keywords: breastfeeding, caesarean section, post-partum

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Introduction

Breastfeeding (BF) is defined as the feeding of newborns and infants with breastmilk. Exclusive breastfeeding is the gold standard for infant feeding during the first months of life. The WHO recommends "exclusive breastfeeding for the first six months of life, and continued breastfeeding until the age of two years, or even beyond, according to the desires of the mothers".[1–3] However, it is important to note that, in the developing world, only 38% of children under six months are exclusively breastfed; and that in Cameroon, the rate is just as low, according to the latest DHS Cameroon 2018 report, of 40% between 0-5months.[4] A study conducted in Ghana shows that breastfeeding babies within an hour of birth prevent 22% of neonatal deaths; and children who are breastfed for the first few months are at least six times more likely to survive than children who are not breastfed.[5] The correlation between breastfeeding, health and well-being is becoming clear. In 2017 globally, an estimated 78 million newborns waited more than an hour before being put to the breast.

This means that only about two in five children (42%), mostly born in low and middle-income countries, were breastfed within one hour of birth. In West and Central Africa.[6] Despite such benefits, caesarean section negatively affects the practice of breastfeeding. In a study entitled "Birth by cesarean section and the start of breastfeeding" carried out in 2015 in France, by Sylvie Bouvarel, the start of breastfeeding presented more difficulties in the case of cesarean section than in the case of vaginal delivery birth; but there was also is a significant increase in the first latching time after csection.[7] Besides the time of initiation which is delayed, the duration of the period of exclusive breastfeeding can be shortened. In addition, some authors have reported even more negative effects in the event of a planned cesarean compared to an emergency cesarean.[8,9] These data are of utmost importance to consider with the increase of C-section rates even in regions with limited resources.[10] Within this context we designed this monocentric study with the objective to analyze the practices of breastfeeding after C-section as well as the factors that influence it.

Materials and methods

We conducted a retrospective and analytical cross-sectional study over a period from January 2020 to July 2020. It took place in the maternity ward of the Essos Hospital Center, a tertiary level care structure in the city of Yaoundé. Were included in our sample, women who gave birth less than 2 months ago by C-section at term of living newborns of at least 36 weeks of amenorrhea.

After consulting their medical records, they were contacted by telephone, and the study was clearly presented to them, with its objectives and informed consent. The main variables collected during the interview concerned socio-demographic characteristics, duration of the stay in the maternity ward, length of separation after C-section and breastfeeding practices. Interviews used a pre-established and pre-tested questionnaire which was validated.

Data were entered and recorded using CSPro version 7.3.1 software. All statistical analyzes were performed using R version 3.6.2 software. At the univariate level, the frequency distributions were used for the categorical variables the Chi 2 test was used to perform the test of independence between the dependent variable and the independent variables, the Fisher's Exact test was used alternatively when the conditions of applicability of the Chi 2 test were not satisfied, in addition the unadjusted ORs were estimated. At the multivariate level, logistic regression was used to estimate the adjusted ORs and their 95% CI to find factors associated with early breastfeeding.

Ethical considerations

Ethical clearances and administrative authorization for carrying out our study were issued by the administrative management of the Essos Hospital Center under reference number 29/20/DCHE/DA/CE-CHE/CNPS and by the Ethics and Institutional Committee of the University of Douala.

Results

The mothers contacted numbered 123. Twenty-six of them were unreachable, and 25 refused to participate in the study and two were excluded (due to incomplete collection sheets). A total of 70 mothers were recruited (see Figure 1).

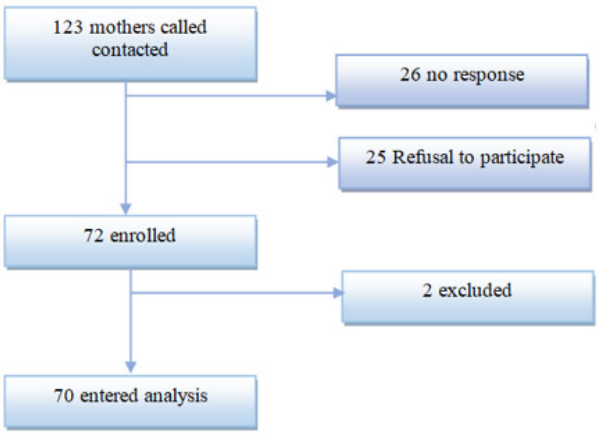

Figure 1 flow chart of recruitment.

Sociodemographic and biodemographic characteristics

The mothers who participated in this study were aged between 20 and 41, of whom 77.1% were aged between 21 and 34; the average age was 30.5 years (see Table 1 & 2).

Table 1 Characteristics of the population

	N	%
Age years		
21-34	54	77.1
≥35	16	22.9
Total	70	100
Employment		
No	30	42.9
Yes	40	57.1
Total	70	100
Marital status		
Single	17	24.3
Married	53	75.7
Total	70	100
Antenatal Follow-up		
Yes	70	100
No	0	0
Total	70	100

Table 2 Feeding mode

	N	%
Artificial Bottle feeding	6	8.6
Exclusive breast feeding (EBF)	30	42.8
Mixed feeding	34	48.6
Total	70	100.0

Feeding practices

- **Initiation and feeding option**

None of the mothers reported giving the breast within one hour of birth. During the first two months, less than half of the mothers practiced EBF (see Table 3).

Table 3 Mother-child separation

	N	%
Duration of separation		
<24h	12	17.1
24h	28	40.0
48h	19	27.1
>48h	11	15.7
Total	70	100.0
Admission in neonatology unit:		
Yes	66	92.9
No	4	7.1
Total	70	100.0
Reason of transfer in neonatology		
Surveillance	36	54.5
Special care	30	45.5
Total	66	100.0
Mother in recovery room		
Yes	66	94.3
No	4	5.7
Total	70	100.0
Admission of mother in intensive unit:		
Yes	5	7.1
No	65	92.9
Total	70	100.0

- **Factors influencing early breastfeeding Mother-child separation and early breastfeeding**

All the mothers had been separated from their children at birth, 40% of them for 24 hours. Sixty-five newborns had been admitted in neonatology. Considering the duration of mother-child separation <24h, it appears that the mothers in this category breastfed earlier (delay 1h-24h) than those in the other categories, namely 24h, 48h and 48-72h; statistically significant between the duration of mother-child separation and the initial breastfeeding delay (p= 0.016; 0.002 and 0.007). With the adjusted odds ratios, we observe a significant difference between the duration of mother-child separation (24 hours (p=0.026) and 48h(p=0.004)) and the time to breastfeed (Table 4 & 5).

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Table 4 Reasons for separation from Mother and delay in breast feeding and unadjusted odds ratio

Birth-first latch time		1h-24h	>24 h	Unadjusted OR (95%CI, p)
Separation time (hours)	<24h	11 (36.7)	1 (2.5)	-
	24h	12 (40.0)	16 (40.0)	0.07 (0.00-0.42, p=0.016)
	48h	4 (13.3)	15 (37.5)	0.02 (0.00-0.18, p=0.002)
	>48h	3 (10.0)	8 (20.0)	0.03 (0.00-0.28, p=0.007)
Mother in recovery room	Yes	29 (96.7)	37 (92.5)	-
	No	1 (3.3)	3 (7.5)	0.43 (0.02-3.52, p=0.469)
Mother admitted in intensive care unit	Yes	0 (0.0)	5 (12.5)	p=0.992
	No	30 (100.0)	35 (87.5)	-
Admission in neonatalogy	Yes	28 (93.3)	37 (92.5)	-
	No	2 (6.7)	3 (7.5)	0.88 (0.11-5.66, p=0.893)
Reason of admission in neonatalogy	Surveillance	18 (64.3)	18 (47.4)	-
	Special care	10 (35.7)	20 (52.6)	0.50 (0.18-1.34, p=0.175)

Table 5 Multivariate distribution of factors associated with delay in breastfeeding after caesarean section

Birth-first latch time		Adjusted OR (95% CI, p)
Separation time (hours)	<24h	-
	24h	0.04 (0.00-0.47, p=0.026)
	48h	0.01 (0.00-0.16, p=0.004)
	>48h	0.07 (0.00-1.39, p=0.107)
Reason for admission in Neonatology	Surveillance	-
	Special care	0.36 (0.04-2.77, p=0.335)
Mother in recovery room	Yes	-
	No	1.42 (0.03-64.79, p=0.844)
Age	21-34 years	-
	≥35 years	0.20 (0.02-1.38, p=0.125)
Level of education	Primary	-
	Secondary	0.20 (0.00-5.46, p=0.363)
	Higher	0.11 (0.00-1.47, p=0.131)
Employment	No	-
	Yes	1.83 (0.37-10.90, p=0.473)
Marital status	Single	-
	Married	0.17 (0.01-1.31, p=0.115)
Parity	Primiparous	-
	Multiparous	1.64 (0.23-15.28, p=0.638)
Type de pregnancy	Single	-
	Multiple	7.60 (0.72-104.09, p=0.103)
Term	Preterm	-
	Normal term	0.21 (0.02-1.69, p=0.161)
	post-Term	0.74 (0.07-7.94, p=0.806)

- **Difficulties during breastfeeding**

We also found that 60.9% of breastfeeding mothers had encountered difficulties, and that the main one was the presence of cracks on the nipples (30.8%), followed by insufficient secretion of milk (20.5%).

Discussion

We aimed to evaluate the practices of breastfeeding after caesarean section in the maternity ward of the Essos Hospital Center. The main result is a delay in the start of breastfeeding, partly caused by the separation of the mother and the baby. However, the exclusive breastfeeding rate is similar to that recorded in the general population.[4] We know that the earlier breastfeeding is started, the longer it lasts and that caesarean section significantly affects the rate of EBF by delaying the latching time.[11] The breastfeeding rate observed in our series is slightly lower than that observed in the study by Wu et al in China, which showed a prevalence of 52.4% for EBF.[12]

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- **Factors influencing early latch on after caesarean section**

All of the mothers interviewed had been separated from their newborns at birth. This prolonged separation at birth negatively influenced early breastfeeding. The results obtained by Albokhary and James in 2014 in Saudi Arabia, on a population of 60 births, including 30 caesareans, are similar to our results. Their results show that none of the caesarized mothers had breastfed early; 60% had breastfed during the 24 hours following birth and 40% more than 24 hours after birth.[13] The data from this site confirms a delay in the initiation of breastfeeding in these caesarized women after 24 hours, while 48% of mothers put their baby to the breast within one hour of birth according to the latest demographic health survey.[4]

- **Problems during breastfeeding**

We also found that 60.9% of breastfeeding mothers had encountered difficulties, and that the main one was the presence of cracks on the nipples (30.8%), followed by insufficient secretion of milk (20.5%). Our result is close to that of Saeed et al, but quite different from that of Hobbs et al.[9,14]

Limitations of the study and recommendations

Among the limitations of the study, we note: the small size of the sample, which is due to the non-availability and massive refusals to participate; the context of the Covid-19 pandemic which made it impossible to meet the patients; the failure to take into account the type of anesthesia in this retrospective study including the type of C-section; elective or emergency caesarean section.[15]

In addition, the monocentric nature of this recruitment in a tertiary health facility may have overestimated the transfer rate and the duration of separation of the newborn from its mother.

Also, on the basis of this preliminary study and in view of the previously stated limits, we suggest a broader study based on data from demographic and health surveys to understand the impact of caesarean section on the initiation and continuation of breastfeeding in our context.[16,17] In addition, building the capacity of staff on this site, for the essential care of the newborn after caesarean section, in particular early breastfeeding is strongly recommended, as well as the practice of skin to skin in women after caesarean especially in case of locoregional anesthesia.[18,19]

Conclusion

In this site, after caesarean section, the almost automatic mother-child separation greatly contributed to lengthening the time to initiate breastfeeding, with moderate effects recorded on the rate of breastfeeding during the first two months of life.

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Conflicts of interest

The authors declare that they have no competing interests.

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