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Study of the Impact of an Outreach Support on the Exclusive Breastfeeding at the Age of 6 Months

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Abstract

Summary: The aim of the study is to show that the use of support counseling in breastfeeding can increase its duration.

Materials and methods: Comparative prospective study from November 2012 to April 2013 on 400 women who delivered at the maternity Souissi Rabat. The pool is divided into two groups one of which received support counseling for exclusive breastfeeding. The women were followed for a period of 6 months. The primary outcome studied was breastfeeding rates.

Results: The average duration of exclusive breastfeeding was 4 months and half versus 3 months in the control group. At a postnatal week, the rate was 76% against 11.5% in the second group with a significant difference, p=0.00, the additional milk was given in 16% against 31% in the control group. A six month breastfeeding rate was 79% versus 58% in the control group (P=0.00), with an exclusive breastfeeding rate of 58% in the study group and 19% in the control group (p=0.000). 36% of women gave formula milk versus 63% in the control group.

Conclusion: Counseling support can have an impact on the duration of breastfeeding by increasing the duration and especially the duration of exclusive breastfeeding. Indeed this support has improved some practices of mothers in breastfeeding as early addition of other liquids.

Keywords: Breastfeeding; Support Counseling; 6 Months; Duration

Introduction

Exclusive breastfeeding up to 6 months is recommended worldwide as the most optimal feeding for all children. The WHO general assembly (World Health Organization) recommended in May 2001, exclusive breastfeeding during the 6 first month of life and continued breastfeeding up to the age of 2 years or more depending on the desire of the mother [1]. The benefits of breastfeeding are many, for the health of the child and his mother. In children, the observed benefits include [2-4].

- A Decrease in infant mortality rates
- The Prevention of certain infections (digestive, respiratory)
- A reduction of certain immunological disorders, and certain chronic diseases
- Reduced risk of eczema during the first year of life in allergy risk infants
- A reduction of around 20 to 25% risk of obesity during childhood and adolescence.
- A blood pressure and lower cholesterol in adulthood.

Despite recommendations and the benefits mentioned above, epidemiological data show large differences between European countries regarding breastfeeding rates. Although trends show a general improvement in all countries since the 1980s [5], breastfeeding rates at the exit of maternity vary, for example, 98% in Sweden to 53% in France and partial breastfeeding rate at six months of 80% in Norway to 10% in Belgium [6].

With these results, the major challenge in some countries was to increase breastfeeding duration, and for that training programs were used (distribution of brochures and information booklets, phone calls, home visits). In Morocco and despite efforts at national level, breastfeeding score does not exceed 14% at six months of life, until 2012 [7]. Unfortunately Morocco has noted a failure in these programs, which are limited to counseling to mothers given by health personnel (doctors, midwives, health team).

The aim of this study was to test the effectiveness of an information booklet to encourage mothers to increase the duration of breastfeeding and to improve exclusive breastfeeding score in our context.

Materials and Methods

This is a randomized clinical trial including 400 women who gave birth at the Maternity Souissi Rabat, conducted between 1er November 2012 to 30 Mai 2013.

- Inclusion criteria: We included women who delivered in the maternity, regardless of age, gender, or their mode of delivery.
- Exclusion criteria: We excluded women with a hypotrophic new-born (<2500 g), premature, or a new-born unstable.

The trial was clearly explained and consent was obtained prior to the visit. No patient refused to participate in the study.

Information on breastfeeding was provided to all women during pediatric visits. Women belonging to the study group also received a booklet containing a set of instructions on the management of breastfeeding and practical data (this book was similar to that approved by the American Academy of pediatrics).

All women were recruited at day 2 of hospitalization, neonatal data delivery were collected from the birth register. Brochures have been designed so that it is understood by all women regardless of their intellectual level (images, pictures...).

The information included in this document focused on the benefits of exclusive breastfeeding, especially if it was extended during the first 6 months.

Data collection was performed using a questionnaire; the first part of this questionnaire was completed in the maternity, the second day of hospitalization, the questionnaire included:

- The mother of data relating to: socio economic level, occupation, age, parity, mode of delivery, maternal knowledge on breastfeeding
- Data on the new-born: weight, size, head circumference, Apgar score

The other parts of the questionnaire were performed at 1, 3, 6 months after delivery at the post natal consultation or by phone for women who could not come to the service, the information mentioned concerned the food history infants up to 6 months of age.

Definition of terms

- Breastfeeding is considered exclusive when the new-born or infant receives only breast milk with the exception of other ingesta, solid or liquid, including water
- Breastfeeding is part when combined with another diet as milk substitutes, cereals, sugar water or not, or any other food [8]
- Hypotrophic new-born: all new-borns whose birth weight is below 2500 g
- Premature new-born: all new-borns born before 37 weeks of amenorrhea (WA).

Statistical analysis

The statistical software SPSS Version 18.0 for Windows (SPSS Inc., Chicago, IL, USA) was used for statistical analysis. The level of statistical significance was considered when $p < 0.05$. Continuous data were presented as mean. When data did not obey a normal distribution, data were reported as medians and interquartile in (IQR). A comparison of continuous data was performed using Student's T test. Discrete data were described in frequency and percentage. Comparisons of categorical characteristics were performed by a chi-square test.

Results

Four hundred women were recruited, 200 were part of the study group and 200 in the control group; no women were lost (Table 1).

	Case	Control
Origin		
Urban	168(84%)	144(72%)
Rural	32(16%)	56(28%)
Socioeconomic level		
bas	133(66.5%)	104(52%)
moyen	67(33.5%)	96(48%)
Profession:		
Housewife	167(83.5%)	172(86%)
Works	33(16.5%)	28(14%)
NIS		
Illiterate	100(50%)	90(45%)
Primary	23(11.5%)	45(22.5%)
Secondary	48(24%)	58(29%)
Faculty	29(14.5%)	7(3.5%)

Followed pregnancy		
Yes	152(76%)	148(74%)
No	48(24%)	52(26%)
Wanted pregnancy		
Yes	193(96.5%)	190
No	7(3.5%)	10
Parity		
P1	100(50%)	124(62%)
=-P1 P3	74(37%)	56(28%)
->P3	26(13%)	20(10%)
Delivery		
Vaginally	163(81.5%)	184(92%)
Caesarian	37(18.5%)	16(8%)
Experience of breastfeeding		
Yes	84(42%)	70(35)
No	116(58%)	130(65)
Contraindications of BF		
Yes	0	0
No	200(100%)	200(100%)

Table 1: Clinical characteristics of mothers.

The two groups were almost identical, since we have not a statistically significant difference in the measured variables (origin, socio economic status, education level, occupation, monitoring and desire of pregnancy, parity, mode of delivery, and breastfeeding experience). The average duration of exclusive breastfeeding was 4.6 months against 3 in the control group (Table 2).

	Case	**Control**	**p**
At 1 week			
Breastfeeding			
Yes	184(92%)	183(91.5%)	0.8
No	16(8%)	17(8.5%)	
Exclusive BF	152(76%)	23(11.5%)	0
Other liquids			
None	152(76%)	23(11.5%)	0
Artificial milk	32(16%)	62(31%)	
Verbena	22(11%)	145(72.5%)	
At 1 month			
Breastfeeding			
Yes	189(94.5%)	178(89%)	0.04

No	11(5.5%)	22(11%)	
Exclusive BF	163(81.5%)	69(34.5)	
Others liquids			
None	163(81.5%)	69(34.5%)	
Artificial milk	20(10%)	54(27%)	0
Verbena	25(12.5%)	94(47%)	
At 3 months			
Breastfeeding			
Yes	178(89%)	148(74%)	0
No	22(11%)	52(26%)	
Exclusive BF	165(82.5)	65(32.5)	
Other liquids			
None	165(82.5%)	65 (32.5%)	
Artificial milk	32(16%)	91(45.5%)	0
Verbena	7(3.5%)	33(16.5%)	
Water		35(8.8%)	
At 6 months			
Breastfeeding			
Yes	158(79%)	117(58.5)	0
No	42(21%)	83(41.5)	
Exclusive BF	117(58.5%)	38(19%)	
Other liquid			
None	117(58.5%)	38(19%)	
Artificial milk	72(36%)	126(63%)	0
Verbena	0	0	
Water	15(7.5%)	51(25.5%)	

Table 2: Breastfeeding rates at one week of life, 1 month, 3 months, and 6 months.

In one week, the breastfeeding rate was (92% vs. 91.5%; p=0.8), the rate of exclusive breastfeeding was (76% vs. 11.5%; p=0.00). The additional milk was given in 16% against 31% in the control group and the verbena (11% vs. 72, 5%).

At 1 month of life the breastfeeding rate was (94% vs. 89%; p=0.04), the rate of exclusive breastfeeding (81% vs. 34%; p=0.00). The other liquids given of breast milk were the artificial milk 10.5%, verbena 12% from milk against the control group was given in 27% and 47% verbena with a statistically significant difference (p=0.000).

At 3 months, 89% of infants were started on breastfeeding, against 74% in the second group (p=0.000). The prevalence of exclusive breastfeeding was 82.5% vs. 33.5%, other liquids data were complementary milk (16% vs. 45%), verbena (3.5% vs. 16.5%).

At 6 months, the breastfeeding rate was 79% against 58% in the control group (p=0.00), with an exclusive breastfeeding rate of 58% in the study group and 19% in the control group (p=0.000). 36% of women given formula milk versus 63% in the control group, no women given the verbena in both groups, 7% of women given water against 25% the second group.

Discussion

Many studies have shown that breast milk has a positive impact on the health of the infant and his mother as well as on the development of psycho-emotional ties between the two protagonists [9-12] and allowed the family to realize a significant saving. Our study was conducted in a level 3 maternity, including 200 women received a nursing guide, the prevalence of breastfeeding at one week of life was

92% in the study group against 91% in the control group; and the rate of exclusive breastfeeding was 76% against 11.5% in the second group with a significant difference p0.00, this difference has proven the effectiveness of breastfeeding guide in improving knowledge and practices mothers in breastfeeding which are still inadequate as evidenced by the need for a mixed feeding mothers in the spirit expressed by the early addition of other liquids.

Globally, the 7ures of the exclusive breastfeeding rate at six months (duration recommended by WHO [13]) remain very low [14,15]. In Morocco, the rate rose from 62 a 46% between 1992 and 1997. The average duration of breastfeeding also declined during the same period, from 15 to 14 months. In a last study in 2006, the rate of exclusive breastfeeding dropped to 15% [9-12]. The decline of the practice of breastfeeding has led to the establishment in 1991 of a national action plan for the promotion of breastfeeding and the introduction of the initiative "hospital baby-friendly" in all maternity hospitals in the Kingdom.

Among the main activities carried out as part of this action plan are the training and retraining of health professionals in outpatient on the importance of breastfeeding to breastfeeding, information and training of service personnel hospital, organizing several information meetings on breastfeeding [9,11,12]. In our study the use of nursing guides is a first experience at the national level, it was aimed to encourage and maintain breastfeeding until the age of six months, this has been achieved in this work since a significant correlation was found between the use of nursing guide and the rate of exclusive breastfeeding (p=0.00), and this can be explained by the richness of this guide drawings and photos that played an important role in passing easy and clear messages. This is consistent with those found in some tests of educational brochures to health or other health promotion brochures, unlike other studies that did not find a significant difference in breastfeeding rates in the age of six months between the group using the breastfeeding guide to the control group [16,17].

Apart from written documents, the promotion and support of breast-feeding identified in the literature are numerous programs (telephone calls, home visits, and training sessions). Many have had positive results on extended breastfeeding rates at local or regional levels, but if we compare the book with other programs, we find that the book is more accepted, more requested by parents, and less returns expensive for the state.

According to ANAES working group, any form of support to the proposed discharge from maternity decreases the risk of stopping exclusive breastfeeding before six months. However, a systematic review of literature on the subject [18] shows that the results of randomized controlled trials show improved initiation rates and short-term continuation of breastfeeding, but the long-term effects (6 months) are weak.

Conclusion

Counseling support can have an impact on the duration of breastfeeding by increasing the duration and including exclusive breastfeeding duration. Indeed this support has helped improve certain practices of mothers regarding breastfeeding as early addition of other liquids. Hence there is need to generalize this experience in terms of all maternity hospitals.

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