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Original Research Article

Effect of Rooming-in on Breastfeeding among Newborns Delivered by Normal versus Cesarean Delivery

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ABSTRACT

Rooming- in is the method for the care of newborn infants in which the baby stays with the mother in the same room , the mother take care of her baby by herself , and the nurses and doctors help her care for her baby in the room. The WHO has emphasized the importance of rooming-in, saying that the pattern of nursing for the first 3 days after birth has a significant effect on breast feeding. [1]
According to the 10 steps to successful breastfeeding by the UNICEF, it is recommended that mothers be assisted in initiating breastfeeding within half an hour of birth and mother should be allowed to stay with their infants for 24 hours a day with rooming-in care. [2]
The aim of study was to evaluate the effect of rooming-in on breastfeeding among newborns delivered by normal versus cesarean delivery in public hospital in metropolitan city.
Method: in this study quasi-experimental multiple time series design was used to evaluate the effect of rooming-in on breastfeeding among 60 samples which were selected by using non-probability convenient sampling and observational check list i.e. Modified Bristol Breastfeeding Simplified Assessment Tool (MBBS-AT) was used to see the effect on breastfeeding.
Result: Rooming-in was more effective on breastfeeding among newborns delivered normally than cesarean delivered newborns. If healthcare provider provide rooming-in with proper schedule and protocol in field then help to enhance the newborns health and quality care.

Keywords: Rooming-in, Breastfeeding, normal and cesarean delivered newborns

INTRODUCTION

"A new born baby has only three demands. They are warmth in the arm of the mother, food from her breasts, and security in the knowledge of her presence. Breast feeding satisfies all three." [3]

Rooming-in is recommended by the World Health Organization (WHO) and UNICEF as part of the Baby Friendly Hospital Initiative (BFHI) programme to promote breastfeeding. [4]

In addition to its advantage in breastfeeding, rooming-in care improves maternal attachment. Rooming-in mother can see, contact and talk to their babies more frequently. Encouraging mother infant contact from birth and rooming in could increase breastfeeding significantly and decrease the incidence of failure to thrive, abuse, neglect, and abandonment of the infant. The rooming-in system supports a greater number of maternal body contacts so there may be positive relationship between rooming-in care and infants emotional stability. After birth, babies who were placed in close body contact with their mothers did not cry during the first 90 minutes postpartum, from such point of view, maternal early body contact is one of the most important factors for increasing mother-infant emotional attachment and decreasing the distress of the newborn

babies. Infants who stayed in their mother‘s room had significantly quitter, sleep and cried lesser than infants who are separated from mothers. [5] If a newborn baby is placed on the mother‘s abdomen, it can crawl up to her breast by itself, find the nipples, and begins to suckle. The odor of the nipple appears to guide the baby. Early contact and opportunity for sucking in the first hour of life is very important for successful breastfeeding. [6] Many mothers sleep more peacefully knowing that their babies are with them. Rooming-in may have other long-term benefits for mothers and babies. Research suggests that rates of child abuse, neglect, and abandonment are lower for mothers who have frequent and extended contact with their newborns during the early postpartum period. [7]

Benefits of Rooming-in mother can get to know her baby by holding, cuddling and responding to her baby‘s cues, her baby will cry less than the babies who are away from their mothers. It will be easier to learn to breastfeed and baby will gain weight faster. Mothers who keep their babies with them at night actually sleep better. [8]

In March 2012, Prior et al conducted systematic review and meta analysis of observational study to determine cesarean delivery (CD) (prelabor or in – labor) is associated with a lower rate of breastfeeding compared with vaginal delivery (VD). The researcher was concluded a negative association between prelabor CD and early breastfeeding. If breastfeeding is initiated, mode of delivery has no apparent effect on the number of mothers still breastfeeding at 6 months Women and health care workers should be aware of the negative associations between CD and early breastfeeding and consequent implications for infants' well-being. [9]

Amy J. Hobbs et.al, conducted research study ‘The impact of caesarean section on Breastfeeding Initiation, Duration and Difficulties in the First Four Months Postpartum in 2016.’ The researcher concluded that when controlling for socio-demographic and labor and delivery characteristics, planned C-section is associated with early breastfeeding cessation. Anticipatory guidance around breastfeeding could be provided to women considering a planned C-section. [10]

Statement: “A study to assess the effect of Rooming-In on breastfeeding among newborns delivered by normal versus cesarean delivery admitted in public hospital in metropolitan city.”

Objectives:

1. To assess the breastfeeding among newborns delivered by normal versus cesarean delivery in control group.
2. To evaluate the effect of rooming-in on breastfeeding among newborn delivered by normal versus cesarean delivery.
3. To identify association between effect of rooming–in on breastfeeding among newborns delivered by normal & cesarean delivery with selected demographic variables.

Hypothesis:

H_1- there will be significant difference between the effect of Rooming-in on breastfeeding among newborns delivered by normal versus cesarean delivery

MATERIALS AND METHODS

This was a quasi-experimental multiple time series observational study done in month of October 2017-feb 2018 in the obstetrics and gynecological department in postnatal ward in sir J.J. Group of hospitals in Mumbai. In this study Rooming-in means, the keeping newborn with mother for 3 hrs with the 1 hrs of interval on same bed total 8-12 hrs per 24 hrs for 3 days. Daily 4 cycles of rooming-in provided to 4 newborns. Structured Rooming-in was provided in study group and routine observation in control group.

Total 60 samples were selected by using non-probability convenient sampling technique and divided into 4 groups i.e. newborns delivered normally and cesarean delivery in study group and control group. Each group contains 15 samples. Inform consent was obtained from mother to

participate in study. Confidentiality was maintained during data collection. This study was approved by the Maharashtra University of Health Sciences, Nasik. Investigator was used observational check list i.e. Modified Bristol Breastfeeding Simplified Assessment Tool (MBBS-AT) (table no1). Tool was validated by expertise. Reliability of tool was calculated by using Cohen's Kappa calculation 0.8 in interrater method. Main element consists of sub-elements. Each Sub-element defined the normal criteria of the newborn regarding breastfeeding. Total scores of each option were grouped poor=1, moderate=2, good =3. Details are given in table no.1

Data analyzed within and between the group by Mann Whitney test and Wilcoxon test respectively. Determined association of demographic data with effect of rooming-in among newborn in study group analyzed by Kruskal Wallis Test. The calculated data was presented in the form of graphs and tables.

RESULT

In study group, normal and cesarean delivery maximum 53.33 % and 26.67% samples were belongs to 26 to 30 years of age, respectively. Housewife's 93.33% were in both the group. In normal delivery group majority 46.67% samples studied up to secondary education, and in cesarean delivered group 26.67% samples educated up to primary level. In vaginal delivery maximum 40% samples were primi gravida and in cesarean delivered group 33.33% of samples were primi and second gravida. The majority in normal delivery group 40% and in cesarean delivered group 33.33% were primipara, in vaginal delivery maximum 66.67 % and in cesarean delivery, maximum 60 % samples were from 2501 to 3000 gm birth weight. In normal delivery 60% male and in cesarean delivery majority 53.33% were female samples.

Table no 2. Shows that Comparison of normal delivery within study and control group hypothesis was tested using Mann Whitney test as the data was in the ordinal format and comparison is done for two different samples. The z table value for 0.05 level of significance was 1.96. As the calculated z value is more than the Z tab score of 1.96 for day 1, day 2 and day 3 comparison, alternate hypothesis (H_1) is accepted for all three comparison.

Hence we can state that rooming-in is more effective on breastfeeding among newborns delivered by normal in experimental group than in control group.

Table no.3 shows that Comparison of caesarean delivery within experimental and control group hypothesis was tested using Mann Whitney test as the data was in the ordinal format and comparison is done for two different samples. The z table value for 0.05 level of significance was 1.96. Hence we can reject the null hypothesis (H_0) and alternate hypothesis (H_1) is accepted for all day 2 and day 3 comparison. The mean of caesarean delivery group in experimental group is more than control group, which suggests that Rooming in is more effective in caesarean delivery in experimental group than control group.

Table 4. Shows day wise effect of rooming-in on breastfeeding among newborns between normal delivery and caesarean in experimental group admitted in public hospital in metropolitan city**.**

Before calculating the 'z' value, hypothesis (H_1) stated. Hypothesis was tested using Wilcoxon test as the data was in the ordinal format and comparison is done for two different samples. The z table value for 0.05 level of significance was 1.96.
The calculated 'z'value was found to be
1.72 for day first comparison, 3.24 for day second comparison and 3.87 for third day comparison.

As the calculated z value is more than the Z tab score of 1.96 for day 2 and day 3 comparisons, which proves that there is statistically significant difference in mean scores of day 2 and day 3 comparisons among Newborns in experimental group. Hence alternate hypothesis (H_1) is accepted for both comparison. Whereas the calculated Z value for day 1 comparison is less the

respective Z table value, hence null hypothesis (H_0) is accepted and alternate hypothesis (H_1) is rejected for Day 1 comparison. The mean of Vaginal delivery group is more than the Caesarean delivery group, which suggests that Rooming in is more effective in Vaginal delivery than caesarean delivery group.

Hence we can state that rooming-in is more effective on breastfeeding among newborns delivered by normal than experimental group.

There is no association of day 1 MBBSAT outcome with demographic variable among newborns done by Kruskal Wallis test. The calculated χ^2 values for all demographic variables are less than the respective χ^2 table value at 0.05 levels. Regarding association of effect of Rooming-In on breastfeeding with demographic variables it is only associated with education of mother and mode of delivery.

Table No.1 Modified Bristol Breastfeeding Simplified Assessment Tool (MBBS-AT)

Sr.no.	Elements	Grade & score		
		Poor = 1	Moderate = 2	Good = 3
1	Latch on	None ,or any 1 or any2 observations are, Yes , rest No	Any 3 or 4 observation Yes , rest No	Achieving all (5) observations are Yes
2	Sucking	None ,or any 1 or any2 observations are, Yes , rest No	Any 3 or 4 observation Yes , rest No	Achieving all (5) observations are Yes
3	Breast feeding demand and frequency	Observation no.1is Yes , rest No	Observation no. 2 is Yes , rest No	Observation no. 3 is Yes , rest No
4	Vital parameters	All observations are No	Any one observation is No, rest Yes	All observations are normal
5	Evacuation of bladder	Observation no.1 is yes other No	Observation no.2 or no.3 is yes rest no	Observation no.4or no.5 yes. Other no
6	Meconium passed	Observation no.1 is yes other No	Observation no. 2 is yes other No	Observation no.3 is yes other No
7	Weight	Observation no. 1 is yes other No	Observation no.2 or no 3 is yes other No	Observation no.4 is yes other No
8	Sleeping pattern	Observation no.1 is yes other No	Observation no.2 or no.3 is yes other No	Observation no.4 is yes other No
9	Crying	Observation no1. is yes other No	Observation no.2 is yes other No	Observation no.3 is yes other No
10	Skin and muscle tone and movement	Observation no1 is yes other No	Observation no.2 is yes other No	Observation no.3 is yes other No

Table no.2 Comparison of vaginal delivery between study (VDE)and control group (VDC)

Sr no	**Comparison of vaginal delivery between study and control group**		**Mean**	**Sum of ranks**	**U value**	**Z value**	***p* value**
1.	Day 1	study	20.73	175		2.41	0.016
		Control	18.73	290	55		
2.	Day 2	study	22.93	177		2.31	0.021
		Control	20.13	288	57		
3.	Day 3	Study	25.67	147		3.54	0.001
		Control	21.07	317	27.5		

Table no.3 Comparison of cesarean delivery between study (CDE)and control group (CDC)

Sr no	**Comparison of cesarean delivery between study and control group**		**Mean**	**Sum of ranks**	**U value**	**Z value**	***p* value**
1.	Day 1	study	18.80	273		1.93	0.056
		Control	17.27	191	66		
2.	Day 2	study	19.53	310		2.12	0.031
		Control	17.40	155	61		
3.	Day 3	Study	20.47	325		2.57	0.010
		Control	18.07	139	51		

Table no.4.Comparison of vaginal versus cesarean delivery between study group.

Sr no	**Comparison of vaginal delivery versus cesarean delivery between study group**		**Mean**	**Sum of ranks**	**U value**	**Z value**	***p* value**
1.	Day 1	**vaginal**	20.73	175		1.72	0.084
		cesarean	18.80	273	71.5		
2.	Day 2	**vaginal**	22.93	177		3.25	0.001
		cesarean	19.53	310	35		
3.	Day 3	**vaginal**	25.67	147		19.5	0.001
		cesarean	20.47	325	19.5		

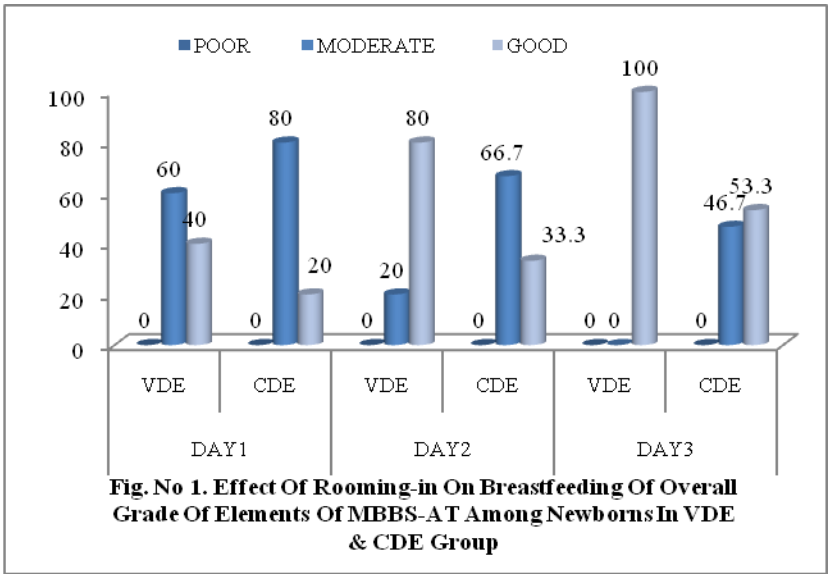

Fig. No 1. Effect Of Rooming-in On Breastfeeding Of Overall Grade Of Elements Of MBBS-AT Among Newborns In VDE & CDE Group

There is in grade the effect of rooming-in on breastfeeding is good 100% improvement in vaginal delivered study group in day 3

DISCUSSION

The study indicated that women who gave birth vaginally were more likely to breastfeed within the first hour and at 24 hours after birth than those who had a cesarean section. The mothers who had cesarean section stated that pain interfered with their ability to hold, breastfeed, and care for their baby. [11]

Breastfeeding rates are lower following cesarean delivery than vaginal delivery. Interventions to improve breastfeeding initiation rates following cesarean delivery can improve overall breastfeeding rates. [12]

The mother was very pleased with her experience with complete care and rooming in upon discharge. Mother continues to breastfeed at ease, thanking the staff for providing teaching techniques and newborn feeding cues. Because of this follow up call, it was evident that the mother and newborns had a positive outcome on rooming in, and truly experienced patient-centered care. [13] It is possible to establish Rooming-In and initiate breast feeding in a tertiary care hospital, even in mothers with cesarean section. [14] That the pattern of delivery affects breastfeeding and that CD mothers need more support, particularly in positioning their babies for breastfeeding compared to VD mothers. [15]

CONCLUSION

Rooming-In was more effective on breastfeeding among newborns delivered normally than cesarean delivered newborns, May be due to cesarean mother scared of incision and pain experience. If healthcare provider provides rooming-in with proper schedule and protocol in field then help to enhance the newborns quality care. This study will help to prepare standard protocol of rooming-in and will be practiced by nurse.

Recommendation:

A similar study can be done on a large sample. A similar comparative study can be done in any other two aspects public and private can be done to see the effect. Using demonstration technique for nurse's effectiveness of this can be seen. A study can be done to find out the effect of planned teaching on above topic for nurses. A study can be done on knowledge regarding various new policies and new guidelines of Rooming-In.

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REFERENCES

1. World Health Organization. Evidence for the ten step to successful breastfeeding Geeneva: world health organization 1998:62-7.
2. NICEF/WHO, baby friendly hospital initiative, revised updated and expanded for integrated care, section –I .http://www.unicef .org/nutrition/files/BFIH Revised _section1.pdf (accessed on August 2008) .
3. http//www.thefreashquotes.com
4. World Health Organization, -Evidence for the ten steps to successful breastfeeding, Geneva, Switzerland, World Health Organization, 1998, http://www.who.int/maternal child adolescent/documents/9241591544/en/.
5. Keef MR Comparison Of Neonatal Nighttime Sleep-Wake Patterns In Nursery Versus Rooming-In Environments. Nurs Res 1987;36: 140-4 .
6. Klaus M mother and infant : early emotional ties .pediatrics 1998; 102 (5 suppl E): 1244-6
7. https://www.nhs.uk/news/pregnancy-and-child/traditional-vs-baby-led-breastfeeding/ Monday 21 April 2008.
8. Missouri Department of Health and Senior Services, WIC and Nutrition Services. Breastfeeding: Rooming-in at the hospital Accessed 3/10/2016.
9. Prior E, Santhakumaran S, Gale C, Philipps LH, Modi N, Hyde MJ, 'Breastfeeding after cesarean delivery: a systematic review and meta-analysis of world literature' Am J Clin Nutr. 2012 May;95(5):1113-35. doi: 10.3945/ajcn.111.030254.
10. Amy J. Hobbs,Cynthia A. Mannion, Sheila W. McDonald, Meredith Brockway, and Suzanne C. Tough The impact of caesarean section on breastfeeding initiation, duration and difficulties in the first four months postpartum BMC Pregnancy Childbirthv.16; 2016 PMC4847344 Publish online 2016 April 26,doi 10.1186/5/2884-016-0876.
11. Afnan A. Albokhary, MMid, BSN, _Does cesarean section have an impact on the successful initiation of breastfeeding in Saudi Arabia?' Saudi Med J 2014; Vol. 35 (11) www.smj.org.sa
12. EdyeKuyper, Bineti Vitta, and Kathryn Dewey conducted study on Implications of Cesarean Delivery for Breastfeeding Outcomes and Strategies to Support Breastfeeding' in February 2014.
13. Liana MacDonald University of Massachusetts Boston 'Becoming Baby Friendly: Rooming-in for Patient Centered Care in the Maternal Setting', Honors College Theses. 5-2016.
14. Cisneros-Silva IE1, Flores-Huerta S, Rosas-Gallegos MC, 'Mother-infant rooming-in and beginning of breast feeding in a tertiary care hospital' Salud Publica Mex.1995 Sep-Oct;37(5):424-9.
15. Cakmak H1, Kuguoglu S. Kent Hospital Neonatal Unit, Izmir, Turkey.Comparison of the breastfeeding patterns of mothers who delivered their babies per vagina and via cesarean section: an observational study using the LATCH breastfeeding charting system. Int J Nurs Stud. 2007 Sep;44(7): 1128-37. Epub 2006 Jul11.

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