

## LATCH SCORE: EFFICACY IN PARTURIENTS WITH TERM VAGINAL DELIVERY Vs TERM CAESAREAN SECTION: CLINICAL STUDY AT RURAL TERTIARY CARE HOSPITAL

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### Abstract

**Background:** Breast milk is the most natural and ideal food for healthy growth and development of new born or neonate. Factors like maternal confidence, latching issues, breast pain, milk insufficiency, and inadequate encouragement contribute to early discontinuation. Assessing breastfeeding in postpartum mothers prior to discharge is important for successful breastfeeding. The LATCH charting system designed by Jensen et al was used to assess the score. The objective is to determine the efficacy of latching in exclusive breast feeding mothers who underwent either Caesarean delivery or vaginal delivery in a tertiary health care sector. **Materials and Methods:** Hospital-based prospective observational study was conducted among 316 mothers who delivered in Adichunchanagiri Institute of Medical Sciences, B.G nagara. The LATCH score was assessed twice, at 1<sup>st</sup> hour and next at 24<sup>th</sup> hour after birth and it was compared between mothers who underwent either normal vaginal delivery or by c-section. **Result:** Good LATCH score was found among the mothers, those who had a normal vaginal delivery. The mean latch score at 1st hour is  $7.14 \pm 1.39$  (Iscs:  $6.36 \pm 1.04$ ; ftnd:  $8.08 \pm 1.18$ ) and at 24<sup>th</sup> hour is  $8.4 \pm 1.04$  (Iscs:  $7.82 \pm 0.7$ ; ftnd:  $9.1 \pm 0.95$ ) and it was significant with the p value for both that is  $< 0.001$ . **Conclusion:** This LATCH assessment tool can identify mothers and infants who are at risk of early breastfeeding cessation and also conclude that mothers who underwent vaginal delivery has higher efficacy of LATCH score compared to caesarean section.

## INTRODUCTION

Breast milk is the most natural and ideal food for healthy growth and development of newborn or neonate. Breast milk, often referred to as liquid gold, nectar, elixir of life, as it not only provides wholesome nourishment to the newborn but also boosts immunity. Also, breast feeding fosters bonding between mother and child and reduces risk of certain health conditions for both, such as obesity. Exclusive breast feeding for 6 months is the optimal way of feeding infants, thereafter, started on complementary feeds with continued breastfeeding up to 2 years of age, as this is the period of maximum brain growth and development. It serves as a child's first immunization as it provides protection from respiratory infections, diarrheal disease, and other potentially life-threatening ailments.<sup>[1]</sup>

Early initiation of breastfeeding means initiation of breast milk feeding within first hour of birth.

Delayed initiation of breastfeeding increases the risk of neonatal sepsis and about 33% neonatal deaths can be averted if breastfeeding is initiated within an hour of birth. Late initiation of breast-feeding leads to high neonatal morbidity and mortality.<sup>[2]</sup>

Breast feeding creates an emotional bonding between mother and infant. Breast milk's immunogenic effect and nutrients contained in it are enough for the baby's growth, making it the breast-feeding option available.<sup>[3]</sup>

Assessment of breastfeeding in the hospital before discharge offers the necessary support and encouragement to mothers enhancing the likelihood of successful breastfeeding. Based on maternal behavior and infant-sucking skills, five lactation tools have been identified in the last decade. They are Lactation Assessment tool, Breast Feeding observation Form, Mother-baby assessment tool, Latch scoring system and Mother-Infant Breast-feeding Progress tool. LATCH scoring system designed by Jensen et al was chosen for this study

because of its ease of applicability, fewer components, and the similarity with the APGAR score format. [4-6]

To reduce the infant and neonatal mortality rate exclusive breast feeding is mandatory so in this study latch score is done to determine the efficacy of latching in exclusive breast-feeding mothers to compare between patients who underwent LSCS (Caesarean delivery) and vaginal delivery in a tertiary health care sector, to observe whether the breast feeding is better in case of vaginal or caesarean delivery.

Hence this study was conducted to determine the efficacy of latching in exclusive breast-feeding mothers who underwent either Caesarean delivery or by vaginal delivery in a tertiary health care sector.

## MATERIALS AND METHODS

This is a prospective study conducted in pregnant women who delivered at Department of Obstetrics and Gynecology, Adichunchanagiri Institute of Medical Sciences(AIMS), Mandya, the score was done at 1<sup>st</sup> and 24<sup>th</sup> hour after delivery. Duration of the study was 3 months (Jan 16,2024 – April 16,2024).

### Inclusion Criteria

All women who underwent either vaginal delivery or by caesarean section at AIMS, BG nagara during the study period and who are willing to participate in the study and APGAR score of baby  $\geq 7$  at 5 min.

### Exclusion Criteria

- Patients who did not give consent.
- Deliveries before period of viability /Preterm deliveries
- Mothers in whom breastfeeding is contraindicated.
- Operative vaginal deliveries,
- Baby having any physical or medical problem which hampers breastfeeding or admitted in NICU.

### Method of Selection of Data

Pregnant women who delivered at Department of Obstetrics and Gynecology at Adichunchanagiri Institute of Medical Sciences, Mandya were included in the study. Clearance from the institutional ethical committee was taken before starting the study. Study participants were included in the study by Purposive Sampling technique. Written informed consent was taken from the study participants before collecting the data. A pre-tested, semi-structured questionnaire was used to collect information on socio-demographic variables and obstetric history by interview method. The assessment of latching (breast feeding) was done by LATCH scoring system as a tool [Table1] which is designed by Jensen et al was chosen for this study, the questionnaire consists of 8 questions, which helps in assessing the latching.

The study was conducted in women who were in their immediate postpartum period (at 1<sup>st</sup> hour and 24<sup>th</sup> hour) fulfilling the inclusion and exclusion criteria.

### The groups were:

- LSCS/C-Section Group (n = 173): women who delivered by caesarean section.
- VD Group (n = 143): women who delivered by vaginal route.

**Statistical analysis:** Data were entered in excel sheet. Descriptive and inferential statistical analysis has been carried out in the present study. Results on continuous measurements are presented on Mean  $\pm$  SD (Min-Max) and results on categorical measurements are presented in Number (%). Significance is assessed at 5 % level of significance. The Statistical software used is SPSS 22.0, and R environment ver.3.2.2 were used for the analysis of the data and Microsoft word and Excel have been used to generate graphs, tables etc.

## RESULTS

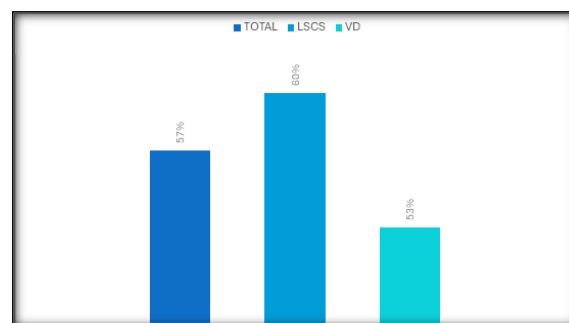


Figure 1: LSCS vs VD in primigravida

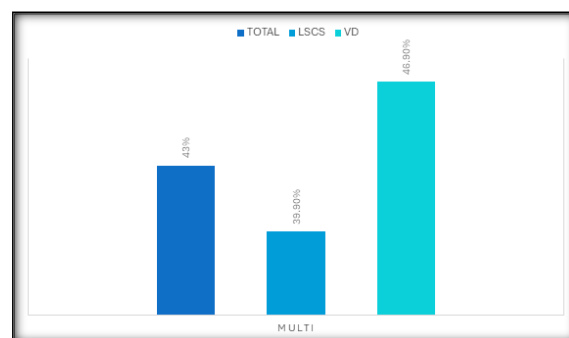


Figure 2: LSCS vs VD in multigravida

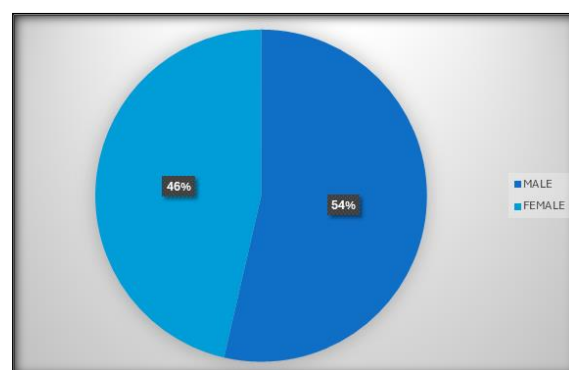


Figure 3: sex of the baby

The study sample consisted of 316 people 173 who underwent caesarean delivery(LSCS) vs 143 who underwent vaginal delivery, majority of the mothers were from rural areas and majority of the people belonged to lower middle socioeconomic status and the mean age min 20 and max 30 years (p value of 0.956) [Table2], regarding infants data 54.4% were delivered through c-section Among them the mean gestational age was 40 weeks ,with minimal gestational age of 37 weeks and maximum of 40

weeks.53.6% were male babies and 46.4 % were female babies the mean birth weight is 2.5-3.5kg (84.9%); [Table 3]. The mean latch score at 1<sup>st</sup> hour is 7.14±1.39 (lscs:6.36±1.04; ftnd:8.08±1.18) and at 24<sup>th</sup>hour is 8.4±1.04 (lscs:7.82±0.7;ftnd:9.1±0.95) and it was significant with the p value for both that is <0.001[Table 4].

So based on the study good latch score was found among vaginal delivery group compared to c-section group and better in multi gravida compared to primigravida.

**Table 1: Breast feeding charting system (LATCH)**

	<b>0</b>	<b>1</b>	<b>2</b>
L(latch)	Too sleepy or reluctant no latch achieved	Repeated attempts	Grasps breast, tongue down lips flanged rhythmic sucking.
A(audible swallowing)	None	A few with stimulation	Spontaneous and intermittent (<24 hrs. old) Spontaneous and frequent> 24 hrs. old
T(type of nipple)	Inverted	Flat	Everted
C(comfort)	Engorged/cracked	Reddened/small blisters or bruises	Soft, non-tender
H(hold)	Full assist	Minimal assist	No assist from staff

**Table 2: Comparison of baseline clinical variables with mode of delivery of subjects studied.**

Variables	MODE OF DELIVERY		Total (n=316)	P Value
	LSCS(caesarean section) (n=173)	FTND(vaginal delivery) (n=143)		
Age in years				
<20	4(2.3%)	4(2.8%)	8(2.5%)	0.956
20-30	154(89%)	128(89.5%)	282(89.2%)	
>30	15(8.7%)	11(7.7%)	26(8.2%)	
Parity				
PRIMI	104(60.1%)	76(53.1%)	180(57%)	0.257
MULTI	69(39.9%)	67(46.9%)	136(43%)	
Gestational age				
37.1-39.6	35(20.2%)	22(15.4%)	57(18%)	0.332
40+	138(79.8%)	121(84.6%)	259(82%)	
Total	173(100%)	143(100%)	316(100%)	
Region				
Rural	147(85%)	127(88.8%)	274(86.7%)	0.402
Urban	26(15%)	16(11.2%)	42(13.3%)	
Socio Economic Status				
Lower Middle	63(36.4%)	60(42%)	123(38.9%)	0.585
Lower class	71(41%)	55(38.5%)	126(39.9%)	
Middle Class	39(22.5%)	28(19.6%)	67(21.2%)	
Education				
10TH PASS	75(43.4%)	64(44.8%)	139(44%)	0.549
12TH PASS	56(32.4%)	37(25.9%)	93(29.4%)	
GRADUATE	18(10.4%)	16(11.2%)	34(10.8%)	
ILLITERATE	24(13.9%)	26(18.2%)	50(15.8%)	

Chi-Square Test/Fisher Exact Test

**Table 3: Variable for comparison of lactational effect in caesarean delivery and vaginal delivery group**

Variables	Mode of delivery		Total (n=316)	P Value
	LSCS(n=173)	FTND (vaginal delivery)(n=143)		
Sex of the Baby				
Female	83(47.7%)	64(44.8%)	147(46.4%)	0.680
Male	91(52.3%)	79(55.2%)	170(53.6%)	
Weight of baby(KG)				
<2.5	12(6.9%)	7(4.9%)	19(6%)	0.234
2.5-3.5	142(81.6%)	127(88.8%)	269(84.9%)	
>3.5	19(10.9%)	9(6.3%)	28(8.8%)	
Weight of baby(KG)	54.17±6.96	50.17±7.13	52.17±7.27	0.243
APGAR 1 MIN	173(100%)	143(100%)	316(100%)	1.000
APGAR 5 MIN	173(100%)	143(100%)	316(100%)	1.000

**Table 4: Comparison of LATCH SCORE in relation to mode of delivery of subjects studied**

Variables	Mode of delivery		Total	P Value
	LSCS	FTND		
Latch score 1 <sup>st</sup> hour	6.36±1.04	8.08±1.18	7.14±1.39	<0.001**
Latch score 24 <sup>th</sup> hour	7.82±0.7	9.1±0.95	8.4±1.04	<0.001**

## DISCUSSION

Breastfeeding is considered an important intervention to reduce infant and under-5 mortality rate. Though breastfeeding is a natural process, some mothers may have problems in breastfeeding, particularly during the initial days after childbirth. Improper breastfeeding technique may result in inadequate feeds leading to excessive weight loss, hypernatremia dehydration, jaundice and re-hospitalization. Evidence suggests that early initiation of breastfeeding and exclusive breastfeeding at hospital are associated with improved rates of exclusive breastfeeding until six months.

So in our study we evaluated the role of LATCH assessment score tool for comparison of early postpartum lactation effects in both groups(LSCS and vaginal delivery). There was a higher LATCH score in vaginal delivery group as compared to caesarean delivery group which indicates higher self-efficacy of breastfeeding in mothers delivered vaginally.

Fadiloglu E et al. (2020), found higher LATCH scores in patients delivered via the vaginal route. They observed significant difference ( $p < 0.001$ ) in the mean LATCH score at 1<sup>st</sup>hour and 24<sup>th</sup>hour of caesarean delivery and normal delivery which was coherent with our results.

In a study of Sowjanya et al, author had used only one objective scoring system- LATCH to predict the duration of exclusive breastfeeding. In the same study it was said that the use of the LATCH tool will assist caregivers to focus on those women with low scores, who are at risk for early weaning.

## CONCLUSION

In the era, where institutional deliveries are ardently promoted, the early post-delivery period can be a good opportunity to evaluate exclusive breastfeeding using the LATCH assessment tool. It is simple and easy-to-use tool that can be used by health workers as it can identify mothers and infants who are at risk of early breastfeeding cessation and serve as a guide to initiate appropriate intervention.

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