



### Literature Article

## A Study to Find the Prevalence of Breast Engorgement among Lactating Mothers

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### Abstract

**Introduction:** Breast engorgement problem was common in early days and also after weeks of breast feeding. This frequent problem can happen to lactating mother who don't or can't breast feed as well as those who do. It is usually caused by an imbalance between milk supply and infant demand, if engorgement left untreated it can lead to potentially serious issues including painful blebs, plugged milk ducts or mastitis.

**Aim:** The study aimed to find out the prevalence of breast engorgement among lactating mothers with vaginal delivery, lower segmental caesarean section.

**Materials and Methods:** A total of 90 women were selected from Saveetha Hospital and Saveetha Rural Health Centre, based on the inclusion criteria Saveetha Hospital and Saveetha Rural Health Centre, based on the inclusion criteria of Lactating mothers with Breast Engorgement and pain for atleast 2-3days who underwent vaginal delivery or lower segmental caesarean section. Exclusion criteria were lactating mothers with soft breast and non lactating mothers and other breast problems. After getting the consent from mothers and after explaining the Six Point Self-rated Engorgement Scale (SPES) and Visual Analogue Scale (VAS). They were asked to rate their level of engorgement and pain. The materials used were VAS and SPES.

**Results:** The study showed that the prevalence of breast engorgement among lactating mothers was 65%-75%.

**Conclusion:** The study concluded that the prevalence of breast engorgement among lactating mothers was 65%-75%. Breast engorgement is a major issue in the lactating mothers can leads to

many problems like blocked milk ducts, feeding difficulties, a depressed milk ejection reflex, infection, inflammation of the breast and sore/cracked nipples.

**Keywords:** Breast engorgement; Breastfeeding; Cesarean delivery; Six point self -rated engorgement scale; Vaginal delivery; Visual analogue scale

### Introduction

Breastfeeding is a mother's gift to herself, her baby and the earth, there is no substitute for mother's milk. Colostrum is a yellowish liquid that contains important nutrients and antibodies that a baby needs right after birth [1]. During initial stages of breastfeeding, mother breasts produce colostrum in small amounts. But after making a couple of days, they're going to increase in milk production. So breast becomes fuller and firmer. This swelling is not only caused by the greater amount of milk, but also by increased blood flow and extra lymph fluids in breast tissue [2]. For most new mothers, these feelings of heaviness pass without problems when their baby feeding well and frequently. But some produce more milk than their breast can hold which makes them feel rock hard and uncomfortably full - a condition called engorgement. Breast engorgement is a problem [3] that is commonly encountered in breast feeding mothers and it can lead to potentially serious issues including painful blebs, plugged milk ducts or mastitis [4]. There are many lactating mothers suffering with breast engorgement [5]. Severe engorgement can make it difficult to baby to latch on to the breast properly and feed well. Engorgement may even cause body temperature to rise around 99-100 degree F, it is also known as milk fever. According to Academy of Breastfeeding Medicine Protocol Committee, breast engorgement is defined as the swelling and distension of the breasts [6]. Usually in the early days of initiation of lactation caused by vascular dilation as well as the arrival of the early milk. Breast engorgement during the first week of breast feeding and can also occurs as a result of delayed, infrequent or interrupted removal of milk from the breast [7,8]. The factors which may place a mother at a higher risk of engorgement are failure to prevent or resolve milk stasis resulting from infrequent or inadequate drainage of the breasts [9,10]. The main aim of the study is to find the prevalence of breast engorgement among lactating mothers with vaginal delivery, lower segmental caesarean section in rural population.

### Materials and Methods

This was an observational study conducted in Saveetha Hospital and Saveetha Rural Health Centre and took nearly 3 months to complete the study. A total of 90 lactating mothers belong to rural areas who complain of engorgement and pain for atleast 2-3 days was selected. Samples collected by convenient sampling with the inclusion criteria of lactating mothers with breast engorgement and pain for atleast 2-3 days who underwent vaginal delivery or lower segmental caesarean section. Exclusion criteria were lactating mothers with soft breast, non lactating mothers, nipple problems such as nipple sore, nipple cracks, inverted nipple or postnatal complications in previous

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**Citation:** Indrani D, Sowmya MV (2019) A Study to Find the Prevalence of Breast Engorgement among Lactating Mothers. J Reprod Med Gynecol Obstet 4: 023.

**Received:** May 15, 2019; **Accepted:** May 24, 2019; **Published:** May 31, 2019

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her vaginal delivery or lower segmental caesarean section. The patients were fully explained about the study and after getting consent from the mothers. They were also given a detailed explanation about the Six Point Self-rated Engorgement Scale (SPES) [11] and Visual Analogue Scale (VAS) [12]. They were asked to rate their level of engorgement and pain. The outcome measures used were SPES and VAS.

Engorgement was assessed using 6-Point Self Rated Engorgement Scale from 1 to 6 (Figure 1)

- 1- being soft, no change
- 2- being slight change
- 3- being firm, non-tender
- 4- being firm, beginning tenderness
- 5- being firm, tender
- 6- being very firm, very tender, [Any measure of 3- firm, no tender or more after baseline was the threshold for this subjective rating]

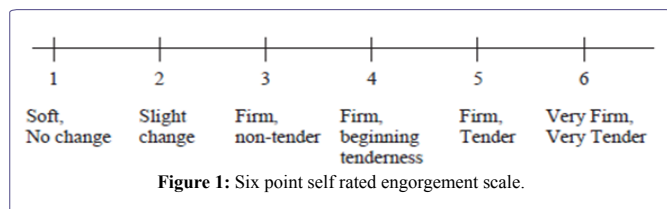


Figure 1: Six point self rated engorgement scale.

Pain was assessed subjectively by using the visual analogue scale, a subjective measure of self-rated pain on a numerical scale of 1-10 (Figure 2)

- 0- Being no pain
- 1-3 being mild pain
- 3-5 being moderate pain
- 5-7 being sever pain
- 7-9 being very severe pain
- 9-10 being worst possible pain [10 being the worst possible pain, 5 moderate pain, 0 no pain]. The threshold for pain was having atleast one subsequent pain measure 3points or more above baseline.

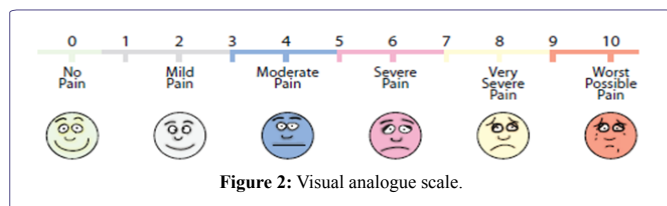


Figure 2: Visual analogue scale.

The participants in this study belongs to lower socio economic status and had no idea about breast feeding positions, breast care, breast engorgement and problems related to breast.

## Results

Total samples of 90 belongs to rural population were randomly selected as a part of the study. Lactating mothers were asked to rate their level of breast engorgement in their breast, according to SPES and also asked to rate their level of pain according to VAS. This study shows that 59-68 lactating mothers complained engorgement and pain in their breast. The result of the study was 65%-75% (Figure 3, Table 1).

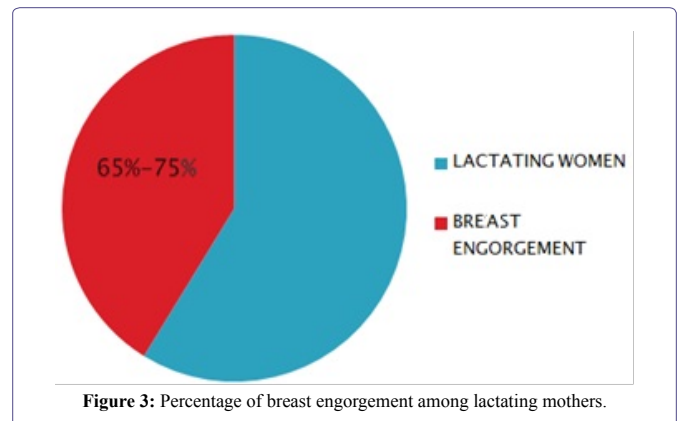


Figure 3: Percentage of breast engorgement among lactating mothers.

S. NO	Name	Age	6-Point Self Rated Engorgement Scale	Visual Analogue Scale
1	Kamachi	28	4	5
2	Meenakshi	25	5	7
3	Rani	27	5	7
4	Roja	20	6	8
5	Sasikala	27	3	2
6	Thagan	31	1	0
7	Srighitha	35	1	0
8	Archana	31	2	2
9	Sumitra	23	5	4
10	Kamaaktchi	31	3	3
11	Monisha	23	5	6
12	Jenifer	23	6	7
13	Anuradha	35	1	0
14	Mahizmadhi	25	1	0
15	Manionmani	36	1	0
16	Poongothai	29	4	8
17	Sindhiya	32	1	0
18	M. Shanthi	40	1	0
19	Ramya	28	3	2
20	Priyanka	24	4	6
21	Rosemitha	23	5	8
22	Selvi	24	3	4
23	Methilda	39	1	0
24	Indra	29	4	5
25	M. Gowri	26	6	9
26	Meenakshi	44	1	0
27	Vaishali	23	3	4
28	Umarani	36	4	3
29	Joly	34	4	3
30	Kavitha	38	1	0
31	Rajarajeshwai	38	1	0
32	Ishwarya	27	4	7
33	Prathisha	26	5	8
34	Mahalakshmi	30	1	0
35	Joshibha	38	1	0
36	Radhika	37	1	0
37	Danalakshmi	34	5	6

38	Madhu	21	6	5
39	Rohini	40	4	5
40	Sujitha	38	5	4
41	Hema	31	4	3
42	Kousalya	39	3	8
43	Lakshmi	35	4	6
44	Rohini. M	24	4	6
45	Fazilath	24	4	6
46	Devi	37	6	8
47	Sylvia	38	5	9
48	Babisha	24	4	7
49	Heena	32	3	6
50	Murrugammal	32	6	7
51	Yosodha	23	3	5
52	Vijayalakshmi	28	4	4
53	Janaki	25	3	5
54	Amulya	28	3	5
55	Malliga	33	2	1
56	Anjali	24	5	4
57	Ramya	33	6	9
58	Rani	34	1	0
59	Kamatchi	22	4	5
60	Sumathi	38	3	2
61	Lakshmi	31	4	2
62	Malliga	22	5	3
63	Devika	30	1	0
64	Uma	29	6	8
65	Komalatha	33	4	7
66	Sarojini	36	1	0
67	Girija	35	1	2
68	Padma	33	2	0
69	Bommi	36	2	1
70	Yasodha	28	3	4
71	Bavani	34	1	0
72	Vanithamani	40	2	0
73	Padmavathi	42	2	0
74	Chandrakumari	27	3	6
75	Vijayalakshmi	26	4	8
76	Sujitha	26	3	4
77	Christina	23	4	6
78	Mallisharani	35	1	1
79	Kanchana	28	4	7
80	Revathi	25	5	8
81	Kalaivani	32	1	0
82	Ehilarsi	28	6	9
83	Bharathy	21	3	4
84	Kaniyammal	33	1	0
85	Meena	27	4	5
86	Panchavarnam	24	3	4
87	Sesikala	30	1	0
88	Premalatha	28	5	8
89	Pavithra	24	6	7
90	Valli	22	4	8

Table 1: Demographic variables of lactating mothers.

## Discussion

In this study breast engorgement was self-reported and diagnosed on the answers given by the lactating mothers. This study provides an opportunity to analyze the prevalence of breast engorgement among lactating mothers with vaginal delivery, lower segmental caesarean section. The samples were selected to find the prevalence with the help of Six Point Self-rated Engorgement Scale and Visual Analogue Scale. It is proven that SPES and VAS have their own validity and reliability. The SPES and VAS are valid diagnostic tools used for measuring breast engorgement and pain. SPES and VAS appears to be valid and reliable measures to assess breast engorgement and pain. Among 90 lactating mothers, this study showed that 59-68 lactating mothers complained engorgement and pain. Results showed that 65%-75% lactating mothers suffering with breast engorgement. Clearly health professionals should educate the mother who intends to breast feed that she is most likely to experience some degree of engorgement during the first two weeks post partum and perhaps for a longer duration. The health professional should not assume that the degree of engorgement or pattern is the same for every breast feeding mother. According to Lawrence [13], it is important that back pressure in the milk should be prevented from developing and eventually inhibiting milk production uncomfortable engorgement is best prevented by frequent breast feeding around the clock, since the infant is the most effective mechanism for removal of milk. Applebaum [14] suggest that if the infant is sleepy or sucking is impaired temporarily, the mother's residual milk and high milk tension may be relieved by breast massage and manual expression.

## Conclusion

The study concluded that the prevalence of breast engorgement among lactating mothers were 65%-75% in rural population. At present there is no approved medicine to 'dry up' milk supply and prevent engorgement. We need to identify effective preventive and treatment measures for engorgement with no side effects to mothers and the baby, which not only helps to relieve the discomforts of lactating mother but also helps to promote proper milk to the baby.

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