# **Original Research Article**

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# A study on traditional practice of squeezing of breasts in newborn care among mothers in a tertiary care centre in Malda, West Bengal, India

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#### **ABSTRACT**

**Background:** Newborn care is culturally and traditionally sensitive in every society. India is a vast country with different communities having their own traditional practices of newborn care. Squeezing of breasts in newborn period is one such unique traditional practice prevalent among population of rural background of West Bengal. This study was conducted to explore the traditional practice of squeezing of neonatal breasts and to highlight its related morbidities following the procedure among newborns.

**Methods:** This was a descriptive, cross-sectional study conducted at triage of Special Newborn Care Unit (SNCU) of Malda Medical College and Hospital among 352 mothers who presented to us with their sick newborns following squeezing of neonatal breasts. After obtaining proper informed consent, mothers were interviewed. The data were collected using pre-designed questionnaires. Statistical analyses of the data were done using SPSS version 21.

**Results:** In the present study, majority (33.52%) of mothers were 18-21 years old and 92.90% were Muslims. Squeezing of neonatal breasts was usually done on 10th day of life (40.34%) and on 4th day of life (27.27%). Local application following squeezing was done with hot turmeric paste (31.25%) and mustard oil (27.56%). Majority of newborns presented with features of mastitis (39.49%), 15.91% with breast abscess and 35.51% with sepsis.

**Conclusions:** This study highlights the harmful aspects of traditional practice of breasts-squeezing among newborns prevalent in rural Bengal. This practice must be condemned by everyone through an integrated approach of proper health education and counseling of mothers and family members.

Keywords: Newborn, Squeezing of breasts, Traditional practice

#### INTRODUCTION

Newborn period starts from the time of birth and extends to first 28 days of life. This period is culturally and traditionally sensitive in every society. India is a vast country with extraordinary characteristics and diversity in terms of its geographical, religious, linguistic, traditional and cultural practices. Different community has its own cultural beliefs and practices. These traditional practices play a vital role in the care of newborns especially in rural parts of West Bengal. Squeezing of breasts in newborn

period is one such traditional practice found mostly among rural population of West Bengal.

Neonatal mortality has been declining worldwide; still it has not reached to the desired level. There are various social and cultural determinants for stagnant neonatal mortality rate in India. Social determinants for child mortality include early marriage and childbirth at a very young age, less spacing between births and low literacy level among women, in particular those belonging to the urban poor and rural settings.<sup>2</sup> Neonatal mortality rate in India at present is 22.7 per 1000 live births.<sup>3</sup> It is far

behind the target of single-digit neonatal mortality rate to be achieved by the year 2030.<sup>4</sup>

Cultural beliefs and traditional practices in newborn care are different in different states of India. Not all rituals and traditional practices are harmful for the newborn. But the traditional practice of squeezing of breasts in newborn period is quite prevalent among rural people of West Bengal and it may prove harmful at times. Newborns frequently develop mastitis, breast abscess and sepsis following the ritual of breast-squeezing. Mastitis neonatorum is a very uncommon condition resulting when the breast is squeezed to remove the milk (witch's milk) which usually comes out of the breast because of the maternal oestrogen effect.<sup>5</sup>

Mothers usually gather information regarding newborn care practices from the elders of the family, relatives and traditional birth attendants and ASHA (Accredited Social Health Activist). They firmly believe in elder's advice and follow it. Hence, health education is to be targeted not only for mothers but also for these groups of people who are involved in child-rearing.

This study was done to describe the selected and unique traditional practice of squeezing of breasts in newborn period in rural area of Malda, West Bengal

Aims and objectives of the study was to explore the traditional practice of squeezing of breasts in newborn care in a rural area of West Bengal and to find out various morbidities related to squeezing of neonatal breasts.

#### **METHODS**

This was a cross-sectional study conducted by interview technique in local language using a pre-designed questionnaire. This study was conducted in Special Newborn Care Unit (SNCU) of Malda Medical College and Hospital, Malda, West Bengal. 352 mothers were enrolled for the study from July 2019 to June 2020.

## Inclusion criteria

Inclusion criteria were post natal mothers attending triage of SNCU of Malda Medical College and Hospital, Malda with their newborns who developed swollen breast following squeezing of neonatal breasts.

#### Exclusion criteria

Exclusion criteria were post natal mothers who were not willing to participate in the study.

#### Data collection

The mothers were explained about the study purpose and informed consent was obtained from each willing mother in presence of her husband or any other family member. The data were collected by interview method from all the willing mothers. Mothers were allowed to take help from her husband or family members while sharing information regarding socio-demographic profile of the family. All data were recorded in the pre-designed questionnaires. Privacy and confidentiality were maintained at all levels of the study.

#### Intervention given

All newborns who presented with swollen breast were examined thoroughly at triage. 32 newborns were diagnosed as physiologic hypertrophy of neonatal breasts and they were sent back to home with reassurance of the mothers and family members. 320 newborns required admission to SNCU for evaluation and proper management.

#### Data analysis

SPSS version 21 (Statistical Package for Social Sciences) and Microsoft Excel were used to analyze the data. Frequencies were presented in the form of percentages and Chi-square test was applied to know the association between variables.

#### **RESULT**

Table 1: Socio demographic profile of the mothers.

Variable	Age (years)	Number	Percentage (%)
	<18	105	29.83
Age	18-21	118	33.52
	22-25	73	20.74
	26-30	36	10.23
	>30	20	5.68
Parity	Primi	228	64.77
Farity	Multi	124	35.23
Duration of	<2	135	38.35
married	2-5	165	46.88
Life	>5	52	14.77
Eamile:	Joint	207	58.80
Family	Nuclear	145	41.20
Religion	Muslim	327	92.90
Kengion	Hindu	25	7.10
	No formal	117	33.24
	5 <sup>th</sup> std	110	31.25
Education	7 <sup>th</sup> std	63	17.90
	9 <sup>th</sup> std	46	13.07
	12 <sup>th</sup> std	16	4.54
	I	71	20.17
Socio-	II	162	46.02
Economic	III	65	18.46
status	IV	32	9.10
	V	22	6.25

In this study, Table 1 revealed that majority (33.52%) of the mothers were within the age group of 18-21 years.

29.83% mothers were less than 18 years old and 20.74% mothers were within 22-25 years. Most (64.77%) of the mothers were primipara and 46.88% had married life of 2-5 years. 92.90% were Muslims and 58.80% belonged to joint family. Most (33.24%) of the mothers had no formal education. 31.25% had studied upto 5th standard, 17.90% had studied upto 7th standard and only 4.54% had studied upto 12th standard. 46.02% belonged to socio-economic status II and 6.25% belonged to status V according to modified B. G. Prasad's classification.<sup>6</sup>

Our study revealed that 82.39% newborns were term and 17.61% were late preterm babies. There was a slight preponderance of female (52.27%) over male (47.73%). Following the ritual of squeezing of neonatal breasts, 31.82% newborns presented to us in their 3rd week of life, 27.84% presented in 2nd week and 27.27% babies presented in 4th week of life and beyond neonatal period (Table 2).

**Table 2: Characteristics of Newborns.** 

Parameter	Number	Percentage (%)
Maturity		
Term	290	82.39
Late preterm	62	17.61
Gender		
Male	168	47.73
Female	184	52.27
Age of presentation	•	
1st week	46	13.07
2 <sup>nd</sup> week	98	27.84
3 <sup>rd</sup> week	112	31.82
4th week and beyond	96	27.27

Table 3: Squeezing of neonatal breasts and related cultural practices.

Parameter	Number	Percentage (%)		
Squeezing of neonatal breasts done on				
4 <sup>th</sup> day	96	27.27		
10 <sup>th</sup> day	142	40.34		
21st day	87	24.72		
Any other day	27	7.67		
Number of attempts				
Single	75	21.31		
Multiple	277	78.69		
Local application following squeezing				
Hot mustard oil	97	27.56		
Hot fomentation	90	25.57		
Hot turmeric paste	110	31.25		
Paste of leaves (Neem/Tulsi)	37	10.51		
No application	18	5.11		

Table 3 revealed that 40.34% newborns had undergone squeezing of their breasts on 10th day of life, 27.27% babies on 4th day and 24.72% babies on 21st day of life. Multiple attempts were tried to squeeze the breasts in 78.69% cases. Following squeezing of neonatal breasts, mothers applied hot turmeric paste (31.25%), hot mustard oil (27.56%) and hot fomentation (25.57%) over breasts. Some of the mothers (10.51%) applied paste of Neem or Tulsi leaves.

Table 4 depicted the clinical features following squeezing of neonatal breasts. 39.49% newborns presented with features of mastitis, 15.91% presented with breast abscess and 35.51% babies had features of sepsis. Only 9.09% newborns presented with feature suggestive of physiologic hypertrophy of neonatal breasts.

Table 4: Presenting clinical features following squeezing of neonatal breasts.

Parameter	Number	Percentage (%)
Hypertrophy of	32	9.09
neonatal breasts		
Mastitis	139	39.49
Breast abscess	56	15.91
Features of sepsis	125	35.51

On applying Chi-square test for socio-demographic variables and traditional practice of squeezing of breasts in newborn period it was found that the age variable was statistically significant (p<0.05) with multiple attempts to squeeze the breasts and application of hot mustard oil. Religion of the mother was statistically significant with the traditional practice of squeezing of neonatal breasts done on 10th day of life and application of hot turmeric paste. Newborn's age of presentation was also statistically significant with the presenting clinical features of mastitis and sepsis.

#### **DISCUSSION**

India is a country with diverse range of ethnicity, religion and language, while in many ways this is the source of richness and strength but cultural influences sometimes give rise to challenges in the context of managing common illness.<sup>7</sup> Newborn care is more challenging in rural areas where people strongly depend on cultural beliefs and traditional practices.

Neonatal breast enlargement is common (seen in approximately 70% of neonates), usually occurs in term infants in the first week of life and is independent of the sex of the baby. Some of these enlarged breasts may discharge liquid (witch's milk). It causes anxiety among mother and other family members. Parents are very much concerned about future development of their babies' breasts during puberty. They believe in squeezing of breasts in newborn period so that there would be no gynaecomastia in male and no abnormal size-shape of breasts in female child in their adolescence.

The present study explored the traditional practice of squeezing of breasts in newborn care among mothers in Malda, West Bengal, India. Our study revealed that majority (82.39%) of the newborns were born at term (>37-42 wks) and 17.61% were late preterm (>34-37 wks). There was a slight preponderance of female (52.27%) over male (47.73%) newborns.

Most of the newborns (40.34%) had undergone the ritual of squeezing of breasts on 10th day of life, 27.27% newborns on 4th day and 24.72% on 21st day of life. These three days are considered as ear-marked days for naming ceremony along with other ritualistic procedures in rural Bengal. Squeezing of neonatal breasts is usually done by the mother or grandmother or by both. Our study revealed that multiple attempts were taken to squeeze the breasts in 78.69% cases.

Following squeezing of breasts, mothers preferred local application with hot turmeric paste (31.25%), hot mustard oil (27.56%) or hot fomentation (25.57%). Paste of Neem or Tulsi leaves was used for local application in 10.51% cases.

This study revealed that most (31.82%) of the newborns presented to us in their 3rd week of life, 27.84% presented in 2nd week and 27.27% in 4th week or beyond neonatal life. Clinically newborns those who presented with swelling, erythema, warmth, tenderness and induration of the breast, were diagnosed as mastitis. Newborns with these features along with purulent discharge from the nipple, and/or fluctuation, were diagnosed to have breast abscess. When in doubt, ultrasound cleared the confusion between mastitis and breast abscess. On ultrasound, neonatal mastitis can be differentiated from neonatal breast abscess by the presence of increased peripheral vascularity.

The most common causative organism found in mastitis or breast abscess is Staphylococcus aureus; less common causes include gram-negative organisms (e.g. Escherichia coli, Salmonella), anaerobes and Group B Streptococcus. 10-13 Our findings were also the same.

Our study also revealed that following squeezing of breasts, 35.51% newborns developed features of sepsis like temperature instability, poor feeding, lethargy, irritability, vomiting, abdominal distension and multiple pustules on skin. 320 newborns who presented with mastitis, breast abscess or sepsis required admission to SNCU for evaluation and management.

#### **CONCLUSION**

Cultural beliefs and traditional practices in newborn care are unique to every society. Some practices are good, few are harmless while others are potentially harmful to newborn health. Cultural practices are passed on from elders to youth since generations and become a tradition of the society. Hence, traditional practices are deeply

rooted in the minds of people, especially of rural background. The present study explores the traditional practice of squeezing of neonatal breasts in detail and highlights its harmful aspects. This practice must be condemned by all through an integrated approach. The present scenario can be changed through enhancing Information Education and Counselling activities, training-cum-awareness raising of health workers and mothers and family members involved in newborn care.

#### Recommendations

Policy makers need to be aware of the traditional practices of newborn care existent in the community. Community based health workers like PHN (public health nurse), ASHA (accredited social health activist), women self-help groups and local leaders also need to be made aware of various traditional practices and its effect on newborn health. The existing newborn health care system should be integrated with the beneficial traditional and cultural practices. Display of banners depicting the harmful practices with educational messages in health institutions may help in raising awareness. Female literacy and empowerment of women are strongly recommended.

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