

OCCURRENCE OF DIAPER RASH DURING INFANCY AMONG CHILDREN IN A
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ABSTRACT

Background: Diaper rash is a common health problem among infants. Based on several studies done on the incidence of diaper rash during infancy, it was found that the diaper rash is common due to urine and feces on the diaper area. Exposure to urine for a long period of time, increased temperature, humidity and pH are the reasons for this. Various other reasons identified for diaper rash include age of the child, general well being, type of diaper used, application of barrier cream and type of feeding¹. Hence this study aims to assess the occurrence of diaper rash during infancy among children between the age group of 1-2 years. **Methodology:** A Descriptive study was conducted with a sample size of 100 mothers of children between the age group of 1-2 years using structured questionnaire to assess the reported occurrence of diaper rash among children. **Results:** The findings showed that among 100 children, 36 had experienced diaper rash in which all of them were using disposable diapers and there is no significant association between diaper rash and selected socio demographic variables ($P>0.05$). But found to have clinical significance in risk factors that develops diaper rash. **Conclusion:** The occurrence of diaper rash is commonly found among children who use disposable diapers during their infancy when compared to washable cotton diapers. It can be reduced by meticulous hygienic practices and by minimising the duration and by using washable cotton diapers in place of disposable synthetic diapers.

KEYWORDS: Children, Diaper rash, Disposable Diaper, Infancy, Occurrence, Washable Diaper.

INTRODUCTION

Napkin dermatitis otherwise called diaper rash is a common condition that occurs in otherwise healthy infants. It causes discomfort to infants, anxiety to parents and care givers and contributes to the load on the health care system. A large variety of napkins, both disposable and non-disposable are available.^[1] Evidence is required to assist carers and health care workers in meeting informed decision when balancing the pros and cons of different napkin choices.^[2]

Diaper rash may occur at any time, to any child and to the most meticulous parent, and it occurs frequently between 9 and 12 months of age because of increased use of diapers during this period. Care and prevention of diaper rash can present a challenge for pediatric nurses

and parents.^[3] It is not a disease but just an irritation of the skin which when severe, becomes painful and distressing for the infant, and source of great anxiety for care givers.^[4]

The background studies strengthen the need for conducting the current study. Review of relevant and most recent literature supports this. Biranjia-Hurdoyal SD, Pandamikum L. conducted a study to investigate the prevalence of nappy rash among babies aged 0-36 months with a sample size of 400. Mothers were interviewed with the help of a questionnaire which showed that out of 400, 303 babies were found to have a history of at least one episode of nappy rash, with a peak at the age of 7-12 months.^[1]

Li CH, Zhu ZH, Dai YH. conducted a study on diaper dermatitis: a survey of risk factors for children aged 1-24 months in China with a sample size of 1036 children and the study showed that prevalence of diaper dermatitis increased with increasing infant age across different age group (1-6, 7-12, 13-18 and 19-24 months) and was significantly lower in children aged 1-6 months compared with the other three age groups.^[2]

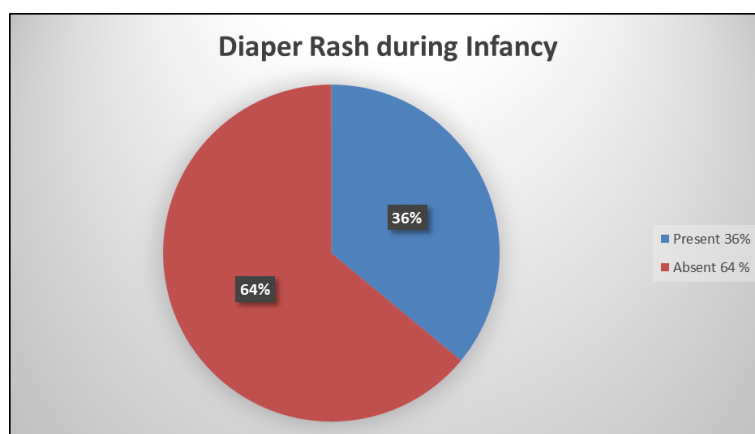
MATERIALS AND METHODS

Descriptive design was used for the study with the aim of determining the occurrence of diaper rash during infancy

among children. The study was conducted among 100 mothers having children between the age group of 1-2 years attending the Paediatric Department of a selected tertiary care hospital, Kochi using convenience sampling.

Ethical clearance was obtained from the institutional ethical committee and informed consent was taken from mothers prior to data collection. Data collection was done by interview method using a structured questionnaire. The data was analyzed using descriptive and inferential statistics.

RESULTS



N=100

Figure 1: Percentage distribution of infants based on the reported occurrence of diaper rash.

The above figure shows that majority, (64%) of children under study have never experienced diaper rash during

their infancy and 36% have experienced diaper rash during their infancy.

N=100

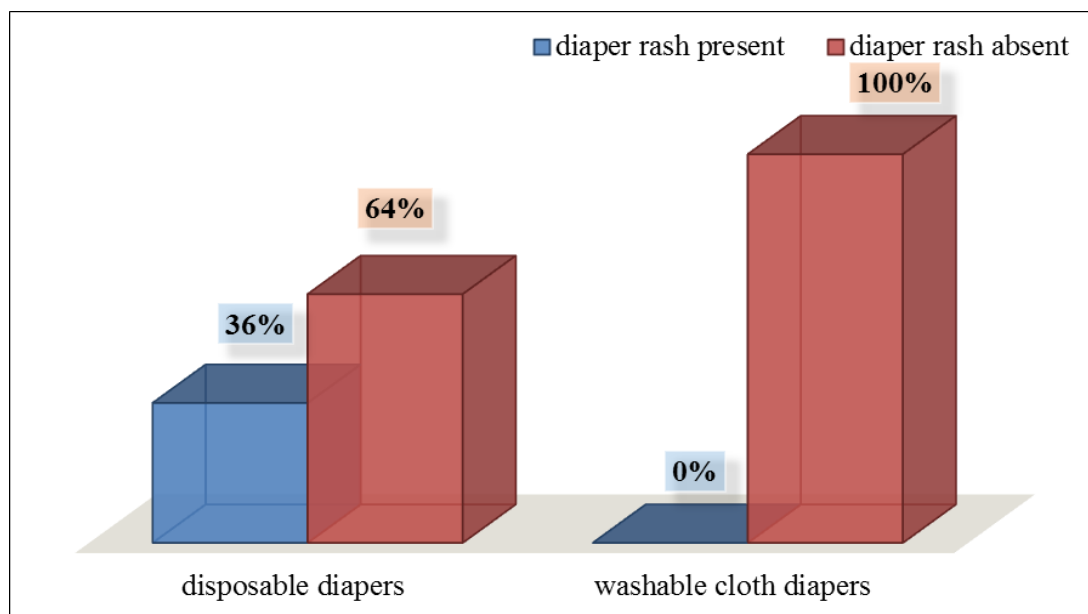


Figure 2: Percentage distribution of the occurrence of diaper rash and the type of diaper used.

The above figure shows that out of 100 children, 36% have developed diaper rash among which all of them were using disposable diapers.

Table I: The frequency and percentage distribution of the factors for the development of diaper rash.
N=36

VARIABLES	FREQUENCY	PERCENTAGE
Type of diapers		
Disposable	36	100%
Washable cloth diapers	0	0%
Frequency		
Every 1-2 hours	5	13.8%
Every 2-4 hours	22	61.1%
Every 4-6 hours	8	22.2%
Every 6-8 hours	1	2.7%
Time of using diaper		
While sleeping	15	41.6%
While travelling	14	38.8%
Throughout the day	7	19.4%
Intermittently	0	0%
Practice while changing the soiled diaper		
Immediately	12	33.3%
Within 10-15 minutes	11	30.5%
After 15 min within ½ hour	9	25%
After ½ hour / when convenient	4	11.1%
Method of cleaning the area before changing the diaper		
Dry cloth	3	8.3%
Wet cloth	25	69.4%
Using alcohol containing wiper	8	22.2%
Number of diapers per day		
2	16	44.4%
4	12	33.3%
6	4	11.1%
More than 6	4	11.1%

The above table shows that the risk factors which develops diaper rash includes disposable diapers (100%), frequency of changing diapers is every 2-4 hours (61.1%), time of using diapers [while sleeping(41.6%) and while travelling (38.8%)], practice while changing

the diaper [immediately (33.3%) and within 10-15min (30.5%)], method of cleaning the area before changing the diaper [wet cloth (69.4%)] and number of diapers per day [2 diapers (44.4%)]

Table II: Association between the diaper rash and the selected socio demographic variables such as the gender, the person with whom the child is residing and the number of siblings.

N=36

VARIABLES	FREQUENCY	P VALUE	χ^2 VALUE	df
Gender				
1. Boy	16	0.150 ^{ns}	2.068	1
2. Girl	20			
With whom the child is residing				
1. Father	0	0.693 ^{ns}	0.733	2
2. Mother	1			
3. Both parents	35			
Number of siblings				
1. No siblings	16	0.756 ^{ns}	1.187	3
2. 1	17			
3. 2	3			
4. More than 2	0			

^{ns}not significant (P<0.05)

From the above table it is seen that there was no significant associations between diaper rash and the

gender (P=0.150), the person with whom the child is residing (P=0.693) and the number of siblings (P=0.756).

Table III: Association between the diaper rash and the selected socio demographic variables such as the education of father and mother and the occupation of father and mother.

N=36

VARIABLES	FREQUENCY	P VALUE	χ^2 VALUE	df
Education of father				
1. Primary education	1	0.151 ^{ns}	5.300	3
2. Secondary education	15			
3. Graduate	19			
4. Post-graduate/ professional	1			
Education of mother				
1. Primary education	1	0.156 ^{ns}	5.230	3
2. Secondary education	12			
3. Graduate	20			
4. Post-graduate/ professional	3			
Occupation of father				
1. Government service	3	0.654 ^{ns}	2.447	4
2. Private employee	21			
3. Self-employment	10			
4. Medical professional	2			
Occupation of mother				
1. House wife	26	0.193 ^{ns}	6.083	4
2. Governmental service	2			
3. Private employee	5			
4. Self-employment	0			
5. Medical professional	3			

^{ns}not significant (P<0.05)

From the above table it is seen that there is no significant association between the diaper rash and the education of father (P=0.151), education of mother (P=0.156),

occupation of father (P=0.654) and the occupation of mother (P=0.193).

Table IV: Association between the diaper rash and the selected socio demographic variables such as the type of family, the order of birth and the previous experience of caring children with diaper dermatitis.

N=36

VARIABLES	FREQUENCY	P VALUE	χ^2 VALUE	df
Type of family				
1. Joint Family	24	0.307 ^{ns}	1.402	1
2. Nuclear family	12			
Order of birth				
1. First child	19	0.751 ^{ns}	1.207	3
2. Second child	16			
3. Third child	1			
4. More than third child	0			
Previous experience of caring children with diaper dermatitis				
1. Yes	3	0.097 ^{ns}	2.751	1
2. No	33			

^{ns}not significant (P<0.05)

From the above table it is seen that there is no significant association between the diaper rash and the type of family (P=0.307), the order of birth (P=0.751) and the previous experience (P=0.097).

DISCUSSION

The aim of the present study was to determine the reported occurrence of diaper rash during infancy among children. Data was collected from 100 mothers having children between the age group of 1-2 years and

analysed. Most of them (64%) have never experienced diaper rash during their infancy and only 36% have experienced diaper rash. It was seen that all the children who developed diaper rash were using disposable diapers. There was no significant association between diaper rash and any of the selected socio demographic variables. But it was found that there is clinical significance for the risk factors such as type of diaper, frequency of changing the diaper, time and duration of

using the diaper, method of cleaning and the number of diapers used per day.

The results of the present study were in congruence with the similar studies done previously. A study was carried out to find out the prevalence and frequency of diaper rash among Indian infants. This study which was carried out in Udaipur city was centred on the role of diapers in the development of rashes. A total of 110 Infants and their parents were included in the study and the results revealed that the frequency of moderate rash reached maximum at the age of 9 to 12 months. Rash frequency and severity were significantly lower when the mean number of diaper changes per day was above average as reported by the parents, regardless of the type of diaper used.^[5]

CONCLUSION

The result of the study shows that among 100 children, 36 have experienced diaper rash and all of them were using disposable diapers. This is something to be noted as there is a widespread practice of using the commercially available, disposable diapers. Though there is a factor of convenience, the other associated practices like allergy towards the material used, the duration of use, the frequency of changing etc. may be contributing to the problem of diaper rash. The study also shows that the conventional cloth diapers are much safer to use when compared to the synthetic disposable diapers. Therefore it is vital for the parents and the care givers to know how to manage diaper rash and to prevent the symptoms from getting worse. It is important to create awareness among the mothers regarding the use of diapers and to help them to learn more about the cause of diaper rash as well as its effective management.

Conflicts of Interest: Nil.

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