

FREQUENCY AND DURATION OF BREASTFEEDING AMONG CHILDREN HAVING ACUTE RESPIRATORY INFECTIONS IN MOSUL

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ABSTRACT

Introduction: Breast milk is the ideal feeding for babies. It helps to prevent infections in young children and even in management. **Aim:** The present study is aiming for evaluate the frequency and duration of breast-feeding among children during the first two years of life in Mosul. **Methods:** A case series study design was adopted. A sample of 200 cases which was randomly collected from the pediatric ward and outpatient clinic in Al-Khansaa and Ebin Sena teaching hospitals during the period from the 1st of November 2012 to the 1st of April 2013. **Results:** The lowest frequency of ARIs was among children who gave history of 12 months and more of duration of breast-feeding. Children with history of no breast-feeding more frequently had pneumonia (33.3%) and had bronchiolitis (26.6%). Children who gave history of breast-feeding \geq 12 months had less frequency of otitis media (5.5%) and bronchitis (5.5%). Beside, 14.3% of the cases of otitis media have history of bottle feeding. In this study no significant difference appear between various type of ARIs regarding the short duration of breast-feeding. Short duration of breast-feeding makes child expose to all types of ARIs. **Conclusion:** Frequency of ARIs, in general, depended on the lactation duration. **Recommendations:** All capabilities including health education is needed to be harnessed in order to minimize occurrence of ARIs.

KEYWORDS: ARI, pneumonia, case series, Mosul, Breast feeding.

INTRODUCTION

Breastfeeding is considered a protecting factor against acute respiratory tract infection especially otitis media and pneumonia, since breast milk is rich in element that protect the child against viral and bacterial infections.^[1] Some authors said that early breastfeeding protect against bronchiolitis.^[2]

The decline in duration of breastfeeding (total duration since start breast-feeding until stop) significantly increase the risk of acute respiratory tract infections.^[3] The evidence base medicine support the importance of 6 months of exclusive breastfeeding when compared with 4 months as protected against gastroenteritis and respiratory infections, including otitis media and pneumonia.^[4]

Acute respiratory tract infection (ARIs) can be divided into.^[5]

1-Upper respiratory tract infections include: rhinitis, sinusitis, tonsillitis, pharyngitis, epiglottitis, Laryngotracheobronchitis (croup), otitis media, and

tracheitis. Ear infections and pharyngitis cause the more severe complications (deafness and acute rheumatic fever, respectively). The vast majority of URIs have a viral etiology.^[6] The major risk factors for OM are young age, bottle feeding, and presence of a sibling in the home with ear infection, and increased exposure to infectious agents (day care),^[7] pacifier use.^[8]

Breastfeeding reduces the incidence of acute respiratory infections, provides IgA antibodies that reduce colonization with otitis pathogens, and decreases the aspiration of contaminated secretions into the middle ear space which can occur when a bottle is propped in the crib.^[9]

2- Lower respiratory tract infections include: bronchitis, bronchiolitis, and pneumonia.^[5] The commonest LRIs in children are pneumonia and bronchiolitis.^[6]

Immunization reduces the risk of developing pertussis and the severity of disease in those affected, but does not guarantee protection. The level of protection declines steadily during childhood.^[7,10]

The aim of the present study is to evaluate the frequency and duration of breastfeeding among children under two years of life having acute respiratory tract infections attending two major teaching hospitals in Mosul.

SUBJECTS AND METHODS

Before beginning of data collecting, administrative have was obtained from Nineveh Health Directorate.

The present study is conducted in the pediatric clinics and words in Al-Khansa'a and Ebin-Sena teaching hospitals in Mosul city, which are located on the left and right banks of the Tigris river respectively and they are deliver services to many areas in Mosul city.

Case series study design was adopted in order to achieve the objectives of the present study over a period of five months from 1st of November 2012 to 1st of April 2013.

The present study includes (200) child having acute respiratory tract infection. Children with history of prematurity congenital anomalies and malnutrition were excluded from the sample.

RESULTS

1- The relationship between duration of breast-feeding and common cold

Table (1) demonstrates that although common cold is more frequently (27.5%) seen among children who gave history of 9-12 months duration of breast-feeding than other types of ARIs (24.4%), but this difference statistically is not significant (p-value= 0.632).

On the other hand common cold was less frequently observed among children with history of breast-feeding for <3 months (9%) than other types of ARIs, also this difference statistically is not significant (p-value=0.574).

Table 1: The relationship between duration of breast-feeding and common cold.

Duration of BF (months)	Common cold		No common cold		p-value*
	No.	%	No.	%	
No BF	3	4.4	12	9.2	0.219
< 3	9	13.1	21	16.1	0.574
3-6	18	26.1	41	31.3	0.442
6-9	11	15.9	16	12.2	0.463
9-12	19	27.5	32	24.4	0.632
≥ 12	9	13.0	9	6.8	0.147
Total	69	100.0	131	100.0	

*z- test of two proportions was used.

2-The relationship between duration of breast-feeding and otitis media:

It is clear from table (2) that otitis media was frequently(29.2%) seen in children who gave history of breast-feeding 3-6 months compared to other types of

ARIs(29.5%), this difference statistically is not significant (p-value= 0.845).

Children with history of breast-feeding for ≥12 months duration are least frequently (4.2%) had otitis media than other types of ARIs (9.7%) but this difference is of no significant(p-value=0.378).

Table 2: The relationship between duration of breast-feeding and otitis media.

Duration of BF (months)	OM		No OM		P-value *
	No.	%	No.	%	
No BF	2	8.3	13	7.8	0.869
< 3	5	20.8	25	14.0	0.394
3-6	7	29.2	52	29.5	0.845
6-9	6	25.0	21	12.0	0.079
9-12	3	12.5	48	27.0	0.119
≥ 12	1	4.2	17	9.7	0.378
Total	24	100.0	176	100.0	

*z-test of two proportions was used.

3-Relationship between duration of breast-feeding and pneumonia:

Table (3) revealed that pneumonia was more frequently(36.8%) seen in child who gave history of 3-6 months duration of breast-feeding than other types of ARIs (26.57%), but this difference statistically is not significant (p-value= 0.151).

Table 3: Relationship between duration of breast-feeding and pneumonia.

Duration of BF (months)	Pneumonia		No pneumonia		P-value*
	No.	%	No.	%	
No BF	5	8.8	10	7.00	0.666
< 3	11	19.4	19	13.28	0.282
3-6	21	36.8	38	26.57	0.151
6-9	6	10.5	21	14.68	0.437
9-12	10	17.5	41	28.67	0.103
≥ 12	4	7.0	14	9.80	0.536
Total	57	100.0	143	100.0	

*z-test of two proportions was used.

4- Relationship between duration of breastfeeding and bronchiolitis:

It is clear from table (4) that bronchiolitis was more frequently seen in children who gave history of breast-feeding 3-6 months (32.4%) than other types of ARIs and this difference is statistically not significant (p-value =0.662). Also this table shows that the occurrence of bronchiolitis was more commonly seen in children who

had breast-feeding for 9-12 months (32.4%) than other types of ARIs and this difference is also statistically not significant (p-value =0.834).

While bronchiolitis less frequently (5.4%) observed among children with breast-feeding for 6-9 months than other types of ARIs (15.3%) this difference is statistically not significant (p-value =0.110)

Table 4: Relationship between duration of breastfeeding and bronchiolitis.

Duration of BF (months)	Bronchiolitis		No Bronchiolitis		P-value*
	No.	%	No.	%	
No BF	4	10.8	11	6.7	0.397
< 3	4	10.8	26	16.0	0.427
3-6	12	32.4	47	28.8	0.662
6-9	2	5.4	25	15.3	0.110
9-12	12	32.4	39	24.0	0.284
≥ 12	3	8.1	15	9.2	0.834
Total	37	100.0	163	100.0	

*z-test of two proportions was used.

DISCUSSION

The present study shows that children who gave history of no breastfeeding more frequently had pneumonia (33.3%). These values is similar to the results of Al-Marooof study which shows that children who gave history of no breast-feeding more frequently had pneumonia (48.8%).^[11]

While the present study shows that 35.5% of children with 3-6 months duration of breast-feeding of them had pneumonia. Al-Marooof study shows nearly the same result (31%).^[11]

On the other hand children with history of breast-feeding for 9-12 months duration less frequently had otitis media (5.8%). This figure also parallel to the result of Al-Marooof study which shows that children with history of breast-feeding for 9-12 months duration less frequently had otitis media (4%).^[11]

Study result are difficult to compare, because breastfeeding dose and duration used for comparisons differ widely between studies as does the duration over which outcomes are measured. Results are even more difficult to generalize because the degree of

industrialization and availability of resources within the study setting vary tremendously.^[12]

The present study shows that 16% of the cases of otitis media have the history of bottle-feeding this result come with the study of Abed-Al-Salam A. in Mosul at 2012 which shows that 17% of cases of otitis media gave history of bottle-feeding.^[13]

In this study no significant statistical difference appear between certain type of ARIs comparing to the others regarding the short duration of breast-feeding ,this explained by short duration of breastfeeding makes child expose to all types of ARIs without distinction.

CONCLUSIONS

ARIs frequencies depended solely on the lactation duration probably in part due to the inhibiting effect of breast-milk which suppress the growth of virulent pathogens.

RECOMMENDATIONS

All capabilities including health education is needed to be harnessed in order to minimize occurrence of ARIs.

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