

Relation of Bottlefeed versus Exclusive Breast Feeding Reduction of Acute Gastroenteritis related hospitalization in under 6 months infant

WAQAS MALIK¹, SANA ASHRAF², SARA MALIK³

ABSTRACT

Background: Acute gastroenteritis lead to greater number of physician visits and hospitalization. Breast feeding for at least 6 months can decrease infant mortalityrate.

Aim: To compare between intake of bottle feed and exclusive breast feed in reduction of acute gastroenteritis related hospital admissions in less than 6 months old healthy infant.

Methods: It was a cross sectional study done in the Division of Paediatric Infectious Diseases, Department of Paediatrics, Services Hospital, Lahore. The demographic profile of infants recorded after fulfilling inclusion and exclusion criteria. Data analyzed through SPSS 20.0. Logistic regression technique applied for analysis.

Results: The previous hospital admissions related to acute gastroenteritis in bottle feed were (66%) in boys and 60% in girls .oral rehydration therapy for acute gastroenteritis in bottle feed was 71% in boys and 63% in girls.

Conclusion: Breast feeding was protective against gastrointestinal diseases. This study promotes breast feeding for nourishment and nurturing a bond between mother and her child.

Keywords: Bottle feed, breast feed, acute gastroenteritis

INTRODUCTION

Acute gastroenteritis lead to greater number of physician visits and hospitalization². Worldwide, gastroenteritis causes 12% of all deaths among children less than 5 years of age³.

Human milk is protective for the health of the infants. Breast feeding for at least 6 months can decrease at least worldwide infant mortality due to infectious diseases upto 55%. Breast milk is protective against illnesses and economical. Breastfeeding is important to reduce rotavirus-related gastroenteritis in infants before vaccination was introduced⁵.

There is a protective effect of breastfeeding against rotavirus infection in infants, particularly in children 6 months and younger¹. This study has been designed to document the comparison between exclusive breast feed and bottle feed in healthy infants. No data is available regarding this study in Pakistan. By this single centre study, we will be able to document the comparison between exclusive breast feed and bottle feed in healthy infants so that recommendations can be given to implement the preventive strategies to reduce hospital admissions related to acute gastroenteritis.

¹MO DHQ Hospital, Sheikhpura

^{2,3}WMO, Medicine, Mayo Hospital, Lahore

Correspondence to Dr. Sara Malik Email: saramalik232@hotmail.com Cell: 0333-4430334

The objective of this study is to compare between intake of bottle feed and exclusive breast feed in reduction of acute gastroenteritis related hospital admissions in less than 6 months old healthy infant

OPERATIONAL DEFINITION

Acute gastroenteritis: It is defined as a stool pattern with 3 or more loose or watery stools per day lasting for at least 3 days.

Breast feeding: It is defined as the period of breast feeding from birth until the infant was totally weaned.

Bottle feeding: It is feeding technique using an infant formula or cow milk.

MATERIAL AND METHODS

It is a retrospective Cross sectional study in Department of Paediatrics, Services Hospital, Lahore, for 1 month duration (2015) with sample size of 100 healthy infants is estimated with expected percentage with bottle feeding as 72%³ and breast feed as 28%⁴. Sampling Technique is non-probability convenient sampling

Inclusion Criteria

- Infants of either sex
- Infants of age \leq 6 months

Exclusion Criteria

- Malnourished infant with Z score $<$ -2SD
- Start of complementary feeding
- History of neonatal ICU admissions

Data collection procedure: The study got approved by institutional review board. Informed and written consent taken from father or mother. The demographic profile of infants recorded after fulfilling inclusion and exclusion criteria.

Data analysis procedure: Data was analyzed through SPSS 20.0. Logistic Regression technique applied for analysis in both the groups. P value ≤ 0.05 will be taken as significant.

RESULTS

The study found that breastfed infants have decrease visit or admission for gastroenteritis.

Fig.1: Boys

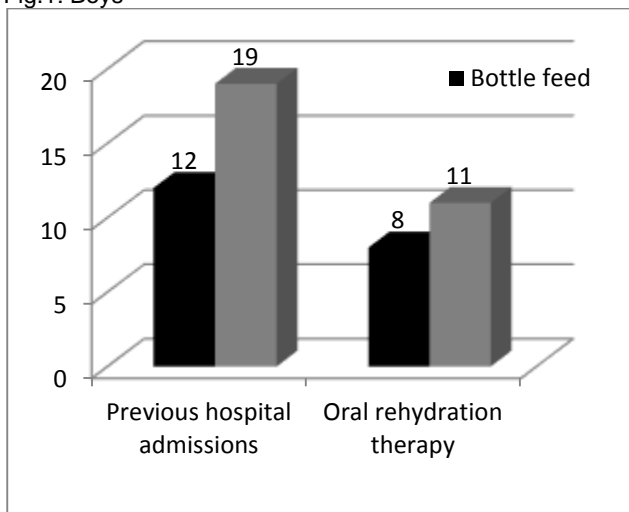
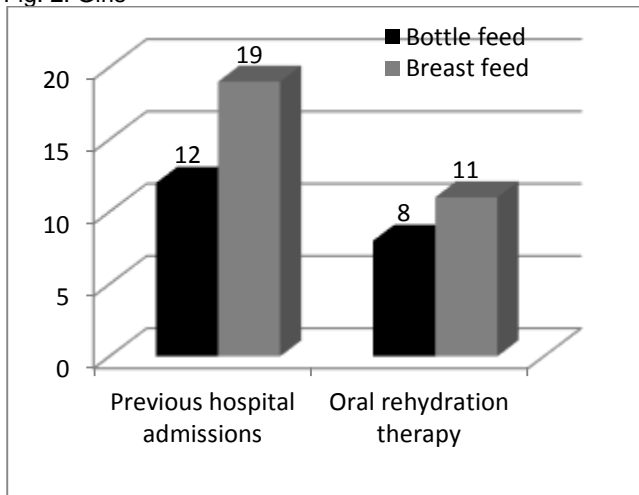


Fig. 2: Girls



DISCUSSION

Out of 100 samples for infants less than 6 months, 50 were boys and 50 were girls. In boys, 15 infants (30%) had previous hospital admissions related to acute gastroenteritis and their feeding technique showed 10 were bottle feed (66%) and 5 were breast feed (34%). Oral rehydration therapy required only in 35 infants (70%) with 25 were bottle feed (71%) and 10 were breast feed (29%).

In girls, previous hospital admissions related to acute gastroenteritis were 20(40%) with 12 were bottle feed (60%) and 8 were breast feed (40%). Oral rehydration therapy required only in 30 infants (60%) and their feeding showed 19 were bottle feed (63%) and 11 were breast feed (37%).

CONCLUSION

It is concluded that breast feeding nourishes and protects infants from gastroenteritis.

RECOMMENDATION

Multicentre community study trial is recommended.

REFERENCES

1. Van den Berg J, Berger M Y. Guidelines on acute gastroenteritis in children: a critical appraisal of their quality and applicability in primary care. *van den Berg and Berger BMC Family Practice* 2011, 12:134
2. Salone LR, William F. Vann J, Deborah L D, Breastfeeding
3. An overview of oral and general health benefits. *JADA* 2013;144(2):143-151.
4. Chow CM, Leung AKC, and Hon KL. Acute gastroenteritis: from guidelines to real life. *Clin Exp Gastroenterol.* 2010; 3: 97-112
5. 4,,HANSON LA, HAHN-ZORIC M, BERNDES M, ASHRAF R, HERIA V, JALILF et al. Breast feeding: Overview and breast milk immunology. *Pediatrics International* 1994;36(5):557-61
6. Plenge-Bönig A, Soto-Ramírez N, Karmaus W, Petersen G, Davis S, Forster J. Breastfeeding protects against acute gastroenteritis due to rotavirus in infants. *Eur J Pediatr.* 2010;169(12):1471-6.
7. doi: 10.1007/s00431-010-1245-0. Epub 2010 Jul 9.
8. Larsen SA Jr, Homer DR. Relation of breast versus bottle feeding to hospitalization for gastroenteritis in a middle-class U.S. population. *J Pediatr* 1978.; 92(3):417