BREAST-FEEDING AND ACUTE APPENDICITIS - A PROSPECTIVE CORRELATIVE STUDY OF BREAST-FEEDING AS A DISEASE MODIFYING FACTOR

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ABSTRACT

BACKGROUND

Acute appendicitis is one of the commonest reason for acute abdomen which needs surgery and so to study the risk factors for the cause of appendicitis this study has been conducted.

MATERIALS AND METHODS

A prospective study of all 68 cases admitted to Chengalpattu Medical College and Hospital, Tamilnadu, between 1 January and 30 November 2016 with proper consent.

RESULTS

88% of the people affected with acute appendicitis were breastfed less than or equal to 12 months.

CONCLUSION

The risk of developing appendicitis is higher among children who never received EBF and who were breastfed for less than 12 months.

KEYWORDS

Exclusive Breast-Feeding, Acute Appendicitis, Risk Factor.

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BACKGROUND

Acute appendicitis is the commonest reason for abdominal surgery in many countries, but its cause is unknown. The hygiene hypothesis attributes the rise in appendicitis that occurred in the United Kingdom at the beginning of this century to improvements in sewage disposal and water supplies in the late 19th century. These improvements in hygiene greatly reduced the exposure of infants to enteric organisms that program the immune system of the gut, thereby rendering the bowel more susceptible to triggering infection later in life. Knowledge about risk factors for appendicitis is, however, poor, and the roles of diet, housing, and amenities such as hot water and bathroom facilities are doubtful. Because breast-feeding can modify the exposure or the type of immune response to some microbial agents during infancy, we investigated the relation between infant feeding and acute appendicitis in this case study.

Because breast-feeding confers many important health and other benefits, including psychosocial, economic, and environmental benefits, it is not surprising that breast-feeding has been recommended by several prominent organisations of health professionals. Among them, the American Academy of Paediatrics, American Academy of Family Physicians, College of Obstetricians and Gynaecologists, College of Nurse-Midwives, American Dietetic Association, and American Public Health Association, all of which recommend that most infants in the United States be breastfed for at least 12 months. These organisations also recommend that for the first six months, infants be exclusively breastfed, meaning they should not be given any food or liquid other than breast milk, not even water.

Regarding nutrient composition, the American Dietetic Association stated, "Human milk is uniquely tailored to meet the nutrition needs of human infants. It has the appropriate balance of nutrients provided in easily digestible and bioavailable forms.^{[1][2]}"

The AAP stated, "Human milk is species-specific, and all substitute feeding preparations differ markedly from it, making human milk uniquely superior for infant feeding. Exclusive breastfeeding is the reference or normative model against which all alternative feeding methods must be measured with regard to growth, health, development, and all other short- and long-term outcomes."

While breast-feeding is recommended for most infants, it is also recognised that a small number of women cannot or should not breast-feed. For example, AAP states that breast-feeding is contraindicated for mothers with HIV, human T-cell lymphotropic virus type 1 or type 2, active untreated

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tuberculosis, or herpes simplex lesions on the breast. Infants with galactosaemia should not be breastfed. Additionally, the maternal use of certain drugs or treatments, including illicit drugs, antimetabolites, chemotherapeutic agents, and radioactive isotope therapies, are the causes for not breast-feeding.

Objectives of the Study

To study the relation between breast-feeding and acute appendicitis correlating with HPE report to enhance the quality of the study.

MATERIALS AND METHODS

All 68 cases admitted to Chengalpattu Medical College and Hospital, Tamilnadu, between 1 January and 30 November 2016 with histologically confirmed acute appendicitis were recruited for the study. All these cases were living in and around Chengalpattu area. Their mothers were interviewed during the stay in hospital by our study group with proper consent, with keeping objectives of the study in mind. Stratified analysis showed that no factor among those we analysed (Birth weight, sex, type of delivery, maternal education, and number of other children in the household) confounded or modified the association between feeding and illness.

RESULTS

In our study conducted in Chengalpattu Medical College, 88% of the people affected with acute appendicitis were breast-fed for duration less than or equal to 12 months. Low birth weight babies are more prone for appendicitis. Data from our study given below in table.

Characteristics	Cases	%
Sex		
Male	52	76.47
Female	16	23.52
Mean age (yrs.)	8.6	
Birth Weight (kg)		
>2.5	21	30.88
<2.5	47	69.11
Type Of Delivery		
Vaginal	59	86.76
Caesarean	9	13.23
Breast-feeding (Months)		
Never	0	0
0-3	31	45.58
4-6	18	26.47
6-12	11	16.17
>12	8	11.76

Table 1: Results from our Study

DISCUSSION

The health effects of breast-feeding are well recognised and apply to mothers and children in developed nations such as the United States as well as to those in developing countries. Breast milk is uniquely suited to the human infant's nutritional needs and is a live substance with unparalleled immunological and anti-inflammatory properties that protect against a host of illnesses and diseases for both mothers and children.

In 2007, the Agency for Healthcare Research and Quality published a summary of systematic reviews and meta-analyses on breastfeeding and maternal and infant health outcomes in developed countries. The AHRQ report reaffirmed the health risks associated with formula feeding and early weaning from breast-feeding.^[3] With regard to short-term risks, formula feeding is associated with increases in common childhood infections, such as diarrhoea and ear infections. The risk of acute ear infection, also called acute otitis media, is 100 percent higher among exclusively formula-fed infants than in those who are exclusively breastfed during the first six months.

The risks associated with some relatively rare but serious infections and diseases such as severe lower respiratory infections and leukaemia are also higher for formula-fed infants.^{[4][5]} The risk of hospitalisation for lower respiratory tract disease in the first year of life is more than 250 percent higher among babies who are formula fed than in those who are exclusively breastfed at least four months. Furthermore, the risk of sudden infant death syndrome is 56 percent higher among infants who are never breastfed. For vulnerable premature infants, formula feeding is associated with higher rates of necrotising enterocolitis. The AHRQ report also concludes that formula feeding is associated with higher risks for major chronic diseases and conditions, such as type 2 diabetes, asthma, and childhood obesity, all three of which have increased among U.S. children over time.^[6]

Compared with mothers who breast-feed, those who do not breast-feed also experience increased risks for certain poor health outcomes.^{[7][8]} For example, several studies have found the risk of breast cancer to be higher for women who have never breastfed. Similarly, the risk of ovarian cancer was found to be 27 percent higher for women who had never breastfed than for those who had breastfed for some period of time.² In general, exclusive breast-feeding and longer durations of breast-feeding are associated with better maternal health outcomes.^[9]

Breast-feeding stimulates a more tolerant lymphoid tissue at the base of the appendix and this could provide protection against acute appendicitis. Two studies reported that children and adolescents with appendicitis were less likely to have been breast fed.^[10] In a case-control study of 200 children with histologically confirmed acute appendicitis matched by 200 siblings with the same sex and different age - up to three-year-old, we found breast-feeding in at least the first two months of life and for more than four months provides protection against acute appendicitis. These findings suggest that breast-feeding may possibly give protection against the development of appendicitis.

CONCLUSION

The risk of developing appendicitis is higher among children who never received EBF and who were breastfed for less than 12 months.

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