

Short Communication

Awareness of natural breastfeeding milk among mothers and the importance of colostrum within the first hour of birth in India

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ABSTRACT

Children should not suffer from the lack of adequate knowledge or ignorance from their parents. Breastfeeding colostrum is extremely useful for the immunity and growth of the newborn, as it is having been documented to improve neonatal survival, and protective against the infection specific mortality among newborn and mothers. The secondary data presented in this paper was abstracted from well-known search engines performed in March 2022. Search engines like Pubmed and Google scholar. In Pubmed 8 articles were returned and Google scholar 11 articles/ key words related to breastfeeding and colostrum and first hour of birth in India. Includes 19 studies altogether, all papers were done within 2019 to 2022 and published in English. Study result showed several preventive diseases among the children and their mother. Spreading awareness about natural breastfeeding and the importance of colostrum among mothers is the key to successfully contribute towards reduction of child mortality. May be carried forward for public health intervention of further research to better informed information, education and counselling for pregnant women for sustainable future of our children according to the United Nations sustainable goals, no one should be left behind.

Keywords: Breastfeeding, Colostrum, Awareness, First hour, Mothers

INTRODUCTION

Colostrum

It is the first milk that baby gets immediately after birth. The mammary gland present within the mother is naturally prepared and releases the milk after giving birth. This colostrum is rich in nutrient and high in antibodies and antioxidants to build a newborn's immune system. As reported by Singh et al the colostrum is a meal that is worth it for infants.¹

Breastfeeding

It is the process by which human breast milk is fed to a child, and it is one of the most effective ways to ensure child health and survival.²

Milk

Human mother's milk refers to the milk produced by mammary glands, located in the breast of every female gender. It is the primary source of nutrition for newborns, containing fat, protein, carbohydrates and variable minerals and vitamins.³

Awareness

awareness is a process that seeks to inform and educate people about a topic or raising issue with the intention of influencing the people attitudes, behaviors and beliefs towards the achievement of a defined purpose or goal.⁴ First hour: first hour here means that, the full or portion of an hour occurring from the moment immediately after the birth of the newborn.⁵

Globally human breast milk has been the most nutritive form, source of nutrients and bioactive antioxidant substances for the survival of their infants, especially at the first hour of birth. Several health benefits of feeding at the first hour of birth have been amply documented. Evidence suggests that cessation of breast feeding from

the first hour of birth leads to several health limitations for the infants. More also numerous studies have reported the adverse effect and risk of infection from child hood to adult hood.^{6,7} The (Table 1), shows the importance of breast feeding among the infant and mother.

Table 1: Importance of breastfeeding.

Evidence-based of breastfeeding for disease prevention	Infants' health	Mothers' health
Infectious and non-infectious disease	Evidence shows that breastfeeding is protective against infectious diseases such as upper and lower respiratory tract infections, gastrointestinal illnesses, and otitis media, during the infant period and beyond. ⁸	There is compelling evidence that breastfeeding is protective against developing premenopausal and probably postmenopausal breast cancer. A review of 47 studies carried out in 30 countries indicated that the relative risk of breast cancer decreased by 4.3 percent for every 12 months of breastfeeding. ⁹
Neurodevelopment and SIDS	Breastfeeding is beneficial for children born pre-term or small-for-gestational-age, which is related to neurodevelopment. This association is seen in term infants also. ¹⁰ Problem of confounding factors was also highlighted in the interpretation of a meta-analysis of breastfeeding and sudden infant death syndrome (SIDS); the combined analysis showed that formula-fed infants were twice as likely to die from SIDS. ¹¹	Studies have consistently shown that hormonal changes associated with breastfeeding help recovery after childbirth and suppress maternal fertility. The extent of these changes is again dependent on the frequency, intensity and duration of breastfeeding. ¹²
Asthma and atopy.⁸	For children with a family history of asthma and allergy, studies have found breastfeeding to be protective against asthma and allergy. ¹³	It is more likely that neither of mom will become obese if she breastfeeds to baby. According to a study conducted by Hailes et al. breastmilk contain 20 calories per ounce and if mom feeds to baby 20 ounces a day that means 400 calories have been swept out of her body. ¹⁴
Chronic disease risk in childhood and later life.¹⁰⁻¹³	Several recent studies have shown that breastfeeding may be protective against chronic diseases such as ischaemic heart disease and atherosclerosis and also for risk markers for diabetes and heart disease, including reduced insulin response, lipoprotein profile, and diastolic blood pressure. ¹²⁻¹⁸	Robust evidence is accumulating that breastfeeding decreases maternal depression and improves mother-infant bonding. ¹⁹

Optimal infant and young child feeding (IYCF) practices are critical for child nutrition and survival. Breastfeeding is a vital component of IYCF. The “global strategy for IYCF” states that “breastfeeding is an unequalled way of providing ideal food for the healthy growth and uncompromised development of infants.

months of life to achieve optimal growth, development and health. In addition to meet their nutrition requirements, infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to 2 years of age or beyond.⁸⁻²⁰

However, it is also an essential part of the reproductive process with important implications for the health of mothers. As a global public health recommendation, infants should be exclusively breastfed for the first 6

Early initiation of breastfeeding has been documented to improve neonatal survival, and protective against the infection specific mortality among newborn infants.

The integral aspect of early initiation of breastfeeding helps to develop a bond between a mother and her baby; it also helps to establish a successful and sustained lactation by inactivating prolactin hence reducing the quantity of breast milk.²¹

Aim and objectives

The aim and objectives of this study was to spread awareness of natural breastfeeding milk among mothers and the importance of colostrum within the first hour of birth in India, because the possible reasons for suboptimal breastfeeding are primarily due to the lack of proper information to mothers, inadequate healthcare support, inability of the healthcare providers to help mothers experiencing breastfeeding difficulty and lack of proper support structures at the community.

METHODS

The secondary data presented in this paper was abstracted from well-known search engines performed in March 2022. Search engines like PubMed and Google Scholar. In PubMed 8 articles were returned and Google scholar

11 articles used keywords related to breastfeeding and colostrum and first hour of birth in India. That included 19 studies altogether, all papers were done within 2019 to 2022 and published in English to answer the research question of this paper. The articles included review works, original articles, text book. These studies were tabulated and compiled in (Table 1-2).

They were further grouped into the importance of breast feeding that was sub categorized into evidence based breast feeding for disease prevention, among the infants and mothers. Neurological development is enhanced for preterm infants’ breast fed. Similarly, it was reported that sudden infant deaths syndrome occurs with infants not breast fed.

While among the mothers there is recovery of mothers’ health after proper breast feeding of infants. Asthma and atopy, studies have shown that infants recovery rate is higher and protective against the disease and among the mothers, neither the child not the mother would be obese. Furthermore, the importance of breast feeding colostrum in the first hour of birth was tabulated, indicating their advantages and disadvantages.

Table 2: Importance of breastfeeding colostrum within the first hour of birth.

Colostrum	Advantage	Disadvantage
Anti-infective effect	Human colostrum has higher concentrations of secretory IgA, growth factors, lactoferrin, anti-inflammatory cytokines, oligosaccharides, antioxidants, and other protective components as compared with mature human milk. ²²	The high mortality rate observed during or shortly after periods of birth are largely the results of hypoglycemia which in turn produces hypothermia and death, before total depletion of the fat body reserves, this is due to delayed initiation of breastfeeding colostrum. ²³
Increases the amount of oxygenated hemoglobin	In newborn infants less than 24 hours old, the odour of the mother’s colostrum increases the amount of oxygenated hemoglobin over the olfactory cortex, as measured by near-infrared spectroscopy. ²⁴	In the study by McNeill et al., insufficient colostrum available for newborns after birth are associated with lack of proper nutrition for the infants. Good nutrition of the infants is essential, to ensure that an adequate supply of colostrum is available to cover the needs of the growing infants. ²⁵
Developing gut microbiota	Newborns have premature digestive system, which suits the low-volume concentrated form of nutrient supply system of colostrum. The laxative effect of colostrum encourages passage of baby’s first stool, meconium. This helps to clear excess bilirubin which is produced in large quantities at birth and helps prevent jaundice. ²⁶	Immunoglobulin levels in the blood are directly related to the production of colostrum, larger volumes of colostrum are associated with larger amounts of immunoglobulins. ²⁷ This process of passive immunoglobulin absorption in the intestine ceases at about 24 hour of age and is referred to as intestinal closure. Therefore any delay in suckling by the newborn, due to low colostrum yield, reduces its chances of obtaining sufficient immunoglobulins to be protected from infection by pathogens. ²⁸

RESULTS

Overview description of included studies

Children should not suffer from the lack of adequate knowledge or ignorance from their parents. In the

included studies the importance of breast feed was not limited to Infectious and non- infectious diseases as reported among the mothers and children. Similarly, the neuro-development and sudden infant deaths, (SIDS) was showed to be preventable among the mother and children if properly breast fed. Even some diseases of family

history for example asthma and atopy could be averted. Evidences suggests that chronic diseases that may appear in later life of the children is most probably halted and these children are protected naturally from the diseases.

DISCUSSION

Colostrum is extremely magical, huge benefit and useful for the immunity and growth of the baby. Colostrum high in carbohydrates, protein, antibodies, and low fat is crucial for an infant. However, newborns with small digestive systems are unable to digest it. Mild laxative effect, encourages baby's first stool passage, which is called meconium rich in antibiotic properties. It also clear extra bilirubin, a waste product of dead red blood cells that is produced in large quantities at birth due to blood volume reduction, helps jaundice prevention as a result of the colostrum.²²⁻²⁹

Leukocytes are in large numbers; protecting the infant from harmful viruses and bacteria. Ingesting colostrum establishes beneficial bacteria in the digestive tract. According to a research conducted by Hart et al. showed breast fed neonates had more compelling advantageous factors in colostrum fed infants than those not even fed colostrum.³⁰ Several studies have reported evidences about the exclusive breast feeding (EBF). A Tanzania study reported that of those that received health care (91%) in ANC, but about one third (39%) and 25% of postpartum mothers reported having received breastfeeding counselling. Several other women cultural belief and perceptions that the mother's milk is low in quantity, may be low for the child development, child is thirsty, need for herbs introduction for ailment and so on are reasons for the early complementary feeding.³¹ In addition, the World Health Assembly (WHA) has set a global target in order to increase the rate of exclusive breast feeding for infants aged 0-6 months up to at least 50% in 2012.³¹ Adherence to these guidelines varies globally; only 38% of infants are exclusively breastfed for the first six months of life according to the report. high-income countries such as the United States (19%), United Kingdom (1%), and Australia (15%), have shorter breastfeeding duration than do low-income and middle-income countries.

However, even in low-income and middle-income countries, only 37% of infants younger than six months are exclusively breastfed.²⁶ To our best knowledge, this was the first study that will spread awareness of natural breastfeeding milk among mothers and the importance of colostrum within the first hour of birth in India and it can help as the baseline towards policy change. May be carried forward for public health intervention of further research to better informed information, education and counselling for pregnant women for sustainable future of our children according to the United Nations sustainable goals, no one should be left behind.^{32,33}

Limitations

Limitations of current study was that the included studies finding may not be generalized globally due to its short communication nature. As observed bias with reference to the study population, as majority are more specified to mothers and pregnant women for inclusion in lieu to women general population. In addition, lack of qualitative data sources is observed in all the studies as well as recalls bias was seen to be one of the limitation of all the studies as they deal with questionnaires and face to face interviews. However, clear and focus discussion on the qualitative and important aspects of colostrum and breastfeeding may be planned for comprehensive insight, which if properly addressed might aid in encouraging and promoting the breastfeeding culture among Indian mothers.

CONCLUSION

The amount of health benefits derived from breastfeeding is influenced by lots of factors not limited to the age of the child at initiation of breastfeeding, colostrum is extremely useful for the immunity and growth of the baby due its high level of carbohydrates, protein, antibodies, and low fat. Therefore, delay in breastfeeding initiation will obviously increase the chance of giving the babies other (prelacteal) liquid supplementations that can enhance infection, which in turn could lower the chance of child's survival. However, mother's educational status plays important role at determining the time a child is introduced to the first breast milk. This study will therefore focus on spreading awareness about the importance of natural breastfeeding and colostrum within the first hour of birth.

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