



Mini Review

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Colostrum Therapy: Definitions and Advances of a New Therapy

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Abstract

Human milk provides countless benefits for the health and growth of the babies.

Objective: Describe the benefits of Oral Therapy of the Immune System (colostrum therapy) as a way of stimulating the immune system of low weight premature infants.

Methodology: Literature review.

Results: The results showed promise for colostrum therapy.

Conclusion: It is necessary that colostrum therapy is carried out by trained professionals with scientific knowledge and who are qualified to follow the protocols recommended by the Health Organs. It should be emphasized that this therapy can assist in the therapeutic conduct to save preterm newborns. However more clinical studies must be done to corroborate these data.

Keywords: Colostrum Therapy, Premature, Immune System

Introduction

Human milk provides countless benefits for the health and growth of babies. World health's agency recommended this use as exclusive food till the babies are six months old, because it contains in its composition essential substances for the beginning and maintenance of life. Early weaning has several reasons, among which we can mention the social factor and the lack of correct guidance on the part of health professionals to postpartum women. Because the guidelines must be clear, objective, and consistent to influence the mother positively and forcefully in her efforts to maintain breastfeeding for the recommended time [1,2].

The colostrum is the first secreted milk after the childbirth, rich in proteins and defense cells. Therefore, it is necessary for the protection of the newborn in particularly the premature thru the administration of the first milk which surpasses the ripe milk in quantities of nutrients, especially in antibodies, to ensure all the nutrients that the child needs to grow and develop [3,4]. Human milk has a high concentration of Immunological factors, such as immunoglobulins such as IgG, IgA, IgM, and lactoferrin, with IgA as one of the major quantities [5].



Prematurity is understood when a child has its birth before 37 weeks of gestation. A preterm infant can show complications that prolong the time in the neonatal intensive care unit and can culminate in death when the child has fragilities, among them low weight and gastrointestinal system, gastrointestinal system immaturity with difficulties in nutrient absorption. The restrict extrauterine growth causes permanent long-term deficits in a variety of systems [6]. Premature newborn does not have physiological maturity, is more prone to infections, unable to defend itself adequately and the mortality risk is larger. Turning the administrations of colostrum necessary to strengthen their immune system [7].

Colostrum Therapy or Oral Immune System Therapy consists of introducing colostrum (first milk produced after delivery, thick and yellow), rich in active immune cells and antibodies in the newborn's body, aiming at the recovery of premature infants in the NICU (Therapy Unit) Neonatal Intensive Care) due to physiological immaturity. They commonly have a deficiency in the immune system and low weight [8]. The main objective of this type of therapy is to assist the child's immune system, without having the nutritional function, serving only as immunotherapy [6]. Studies support the idea that the administration of colostrum, as soon as birth occurs, allows the development of immunity in very low birth weight infants; in addition to improving the prognosis, providing a significant improvement in the defenses of the infant [9].

Colostrum is collected from the biological mother and administered directly into the oropharyngeal mucosa in small doses (drops) from the first hours of life, acting directly on the lymphoid tissues of the oropharynx and intestine, stimulating the immune system, featuring a natural form of protection. 0.2ml of maternal colostrum is administered, that is, 0.1ml on each side of the oral cavity every three hours [6]. As stated above, the objective of this study was to describe the benefits of Oral Therapy on the Immune System (colostrum therapy) as a way of stimulating the immune system of low weight premature infants.

Methodology

For the elaboration of this article, bibliographic research was used through an Integrative Review (IR) of literature for observing the relevance of the theme. As inclusion criteria, 15 scientific articles were used (2015 to 2021), with subjects relevant to the theme and in both national and international journals. The research was carried out between March and May 2021. Articles published before 2015 and those that did not delimit themselves on the proposed theme were excluded. The descriptors selected to perform the searches were: Colostrum Therapy, premature, nursing. As a methodological procedure, this bibliographical research; books, magazines, periodicals, and articles, available on the internet. For the development of this research, an accurate investigation of works published on platforms such as Scielo (Scientific Electronic Library

Online), MedLine (Medical Literature Analysis and Retrieval System Online) and Lilacs (Latin American and Caribbean Literature in Health Sciences) was carried out; where, 46 scientific articles were found, using only 15 papers that were most related to this topic.

Results and Discussion

Colostrum administration earlier and in greater numbers of doses were associated with better clinical outcomes, with lower time to recover birth weight and less time to reach full enteral feeding [10].

The immune system of newborns is immature and thus exposed to a greater risk of disease. The mother's colostrum administered by the oropharyngeal route has the potential to provide oral immunotherapy to preterm infants and thereby enhance the baby's immune response through the antibodies that make up the maternal colostrum. A Study by Lopes et al. [6] found that preterm infants, who received oral immune system therapy, had a longer breastfeeding duration when compared to those who did not receive colostrum therapy.

Conclusion

That colostrum therapy be performed by health professionals (doctors, nurses) based on scientific knowledge and who are qualified to follow the protocols recommended by the Health Organs. It should also be emphasized that this therapy can help in the conduct therapy with the aim of saving the lives of preterm. However, more clinical studies must be done to corroborate these data.

Conflicts of Interest

The authors have no conflicts of interest to declare.

References

1. Lima APE, Castral TC, Leal LP, Javorski M, Sette GCS, et al. (2019) Exclusive breastfeeding of preterm infants and reasons for its interruption in the first month after hospital discharge. *Rev Gaúcha Enferm* pp.40.
2. Euclides MP (2014) Infant nutrition. Scientific basis for healthy eating. Ed. UFV/MG p.616.
3. Lustosa E, Lima RN (2020) Importance of nursing for primary breastfeeding primary care in basic care. *ReBIS* 2(2): 93-97.
4. Almeida NAM, Fernandes AG, Araújo CG (2004) Breast-feeding: An approach about nurse performance in immediate post-birth. *Rev. Eletr. de Enferm* 6(3): 358-367.
5. Ma A, Yang J, Li Y, Zhang X, Kang Y (2020) Oropharyngeal colostrum therapy reduces the incidence of ventilator-associated pneumonia in very low birth weight infants: a systematic review and meta-analysis. *Pediatric Research* 89: 54-62.
6. Lopes JB, Oliveira DO, Soldateli B (2018) Colostrum therapy: a literature review. *Demetra* 13(2): 463-476.
7. Bassan AR, Assumpção PK, Rosa AB, Schutz TC, Donaduzzi DSS, et al (2021) Colostrum therapy and breastfeeding in the prevention of necrotizing enterocolitis. *Electronic journal health collection* 13(3) 1-10.

8. Nascimento MBR, Floriano ML, Giacomet MDM, Duarte MM, Reis MAM (2020) Exploratory study on the use of colostrum therapy in a brazilian maternity hospital's neonatal unit. *Saúde e pesqui* 13(2): 389-397.
9. Álvarez EM, Cabanillas MVJ, Caballero MP, López LS, Kajarabille N, et al. (2016) Efectos de la administración de calostro orofaríngeo en recién nacidos prematuros sobre los niveles de inmunoglobulina A. *Nutr Hosp* 33(2): 232-238.
10. Silva A, Machado R, Nascimento BF, Cunha LV, Padilha PC (2021) Analysis of Clinical Outcomes of Oropharyngeal Colostrum Administration in Very Low-Birth-Weight Preterm Newborns. *Nutrition* 90: 1-21.