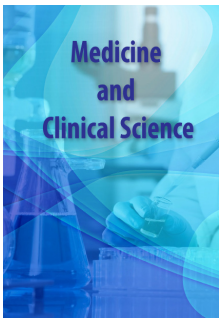
Medicine & Clinical Science

Brief Report



Mothers often do not breastfeed their children although breastfeeding is of multiple importance

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Abstract

Breast milk is a unique natural food for newborns and infants. In addition to satisfy nutritional needs, it enables a child to grow and develop and protects it from pathogens with antibacterial and antiviral activity. Reduces the incidence of autoimmune and chronic diseases, improves intellectual development, prevents childhood overweight and reduces the incidence of type II diabetes later in life. The nutritional composition of breast milk is dynamic and changes depending on the physiology of the mammary glands and the mother's diet. Breastfeeding can also be one way to protect maternal health. Breastfeeding is profitable because it is associated with better health of the child, which means less absence from work and better work efficiency of the mother. Breastfeeding mothers do not need to buy formula or all the accompanying equipment, the bottle, pacifier and sterilizer. It is extremely important to support women during this period to persevere in continuing breastfeeding. Also, education of health professionals is very important, especially those who care for mother and child.

Introduction

Mothers often do not breastfeed their children despite the advice and recommendations of the World Health Organization (WHO), which since 2001 has recommended exclusive breastfeeding without the addition of other foods or fluids for the first six months of life, followed with supplementary feeding with continued breastfeeding until second year of life or longer. [1-4]. Despite numerous evidences of risks and costs related to artificial nutrition, breastfeeding rates in Croatia, as well as in the world, are far below desirable [5,6]. The level of exclusive breastfeeding is particularly low, with the exception of the Scandinavian countries. For example, in Norway, 92% of children are exclusively breastfed at 3 months of age [6].

The WHO and UNICEF breastfeeding return program is based on scientific knowledge about the value of breastfeeding for the health and general well-being of the child. Breast milk is a unique food for infants [7]. It satisfies a range of children's needs from food, health, emotional to social and economic, equally in all areas of the world, regardless of geographical and cultural characteristics [8]. Also, breastfeeding after birth continues the ongoing symbiosis of mother and child, and prevents separation stress, especially pronounced in the child [9]. Thus, breastfeeding provides not only food but also a sense of protection, care, and love, but it is a complex relationship in which both mother and child participate independently, emotionally, and intellectually [9]. Mothers often learn about breastfeeding online, some attend pregnancy classes, and hear too little about breastfeeding from their gynecologist. Healthcare professionals, especially maternity staff, play a very important role in training mothers to breastfeed their children successfully. Healthcare professionals caring for mothers and children have a unique opportunity to actively promote, support and protect breastfeeding. The influence of health professionals is especially important for first-borns. In order to promote, support and protect breastfeeding, health professionals should have appropriate theoretical and practical knowledge and skills with positive attitudes towards breastfeeding [10].

In Croatia we have the so-called medical model of health care, where pregnant women go to gynecologists in primary care, give birth in maternity wards under the supervision of an obstetrician, and go to their pediatrician and family physician for postpartum and general health care. With this in mind, it is precisely physicians who are in dire need of training in breastfeeding, starting with undergraduate/graduate studies, continuing during specialization, and regularly during

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practice [11]. Research has shown that most health professionals who care for mothers and children want additional training on breastfeeding because they consider their training insufficient to be able to provide quality assistance to their patients [12].

Composition and capacity of breast milk

From the birth of a child, the capacity and amount of breast milk changes [13]. Colostrum is formed in the first five days after birth, which is low-fat, high-protein, immunoprotective milk, carotene, vitamins A and E [14]. Due to its rich anti-inflammatory capacity, colostrum is also called the baby's first immunization [14]. After 15 days of birth, mature milk is formed and it is not the same as at the beginning and at the end of breastfeeding. [15] Fat in milk is the most important source of energy for newborns, and also the most variable ingredient in milk. It increases with the duration of lactation: in colostrum it is 20-25 g/L, in transitional milk 25-35 g/L, in mature milk 35-45 g/L. At the beginning of breastfeeding the fat concentration is low and increases with the duration of breastfeeding [15]. The basic carbohydrate in breast and cow's milk is the disaccharide lactose (glucose + galactose). Carbohydrates of breast and cow's milk are lactose and a small amount of polysaccharides. Breast milk contains only 2 g/L, and cow's milk 7 g/L of minerals, which reduces the osmotic load on the kidneys when breastfeeding compared to cow's milk. If a mother breastfeeds her baby properly, her milk meets most of the baby's vitamin needs, except for vitamin D, which should be added from the second month of life [15].

Defensive factors in breast milk

Breast milk contains many defense factors, ie, immunoglobulins, hormones, leukocytes, cytokines and complex oligosaccharides in free form or bound to macromolecules, which provide resilience and protection to the breastfed child [16]. While children fed artificial nutrition are denied those benefits.

Differences between milk formulas and breast milk

If the mother does not breastfeed, in the first months of life the baby is fed a milk formula. The basic raw material for the production of milk formulas is cow's milk. As breast milk and cow's milk are significantly different in their unique composition and are therefore not recommended for infant nutrition [17]. It already needs to be specially adapted, ie adjusted to the needs of the child, so that its composition is as close as possible to the composition of breast milk. The main difference between human and cow's milk, apart from the unique composition for each species, is that human milk contains 9 g of protein / l compared to cow's milk, which contains 34 g/l [17]. Furthermore, breast milk is of variable composition that follows the rhythm of the child's needs [15]. Industrially produced milk cannot follow this natural rhythm of breast milk, it can ensure the child's normal growth and development but it cannot provide him with all biological benefits of natural nutrition [15].

Risks of artificial nutrition

HChildren fed artificial preparations are more likely than children fed breast milk to develop respiratory infections, acute otitis media, nonspecific gastroenteritis,they also have an increased risk of type 2 diabetes, sudden infant death syndrome, eczema (atopic dermatitis), obesity, acute lymphocytosis, acute leukemias, acute myeloid leukemias, and in preterm infants necrotizing enterocolitis [18,19]. Children who are not breastfed have increased risk of poorer development of the child's jaw due to a different way of sucking the bottle, and of not achieving optimal intelligence [20,21]. The risks of artificial nutrition apply not only to children but also to their mothers. Research suggests a possible association between breastfeeding absence and the occurrence of breast cancer, ovarian cancer, endometrial cancer [22-24]. Non-breastfeeding women have an increased risk of postpartum hemorrhage, postpartum depression and cardiovascular disease [25,26].

The cost of artificial nutrition

Children on artificial nutrition often develop disease wich not only affect the quality of life of patients, but it also represent a significant cost to the budget [27]. In the U.S., suboptimal breastfeeding leads to high health care costs, as much as $ 3.0 billion per year, of which 79% falls on maternal costs [28]. Batrick et al. calculated in 2010 that if 90% of women in the United States (WHO) adhered to the WHO recommendations on exclusive breastfeeding during the first six months of a child's life, $ 13 billion could be saved and 911 infants prevented from dying per year [29].

Conclusion

TLow rates and early cessation of breastfeeding have important health, social and economic side effects on women, children, society and the environment and can lead to inequalities in the health status of the population. Milk is a staple food of infants, the main source of energy and nutrients throughout the first year of life. It is unique thanks to the best nutrients and a variety of active ingredients that cannot be replaced. Breastfeeding provides optimal health, nutritional, immune, emotional and developmental support to the newborn, as well as protection of postpartum complications and subsequent diseases in the mother. Beliefs and attitudes towards breastfeeding influence the choice and subsequent success of breastfeeding. This is why it is extremely important to promote, support and protect breastfeeding.

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