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A history of breastfeeding

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SUMMARY

This article presents a brief history of breastfeeding with a particular emphasis on the role of a wet nurse, a woman that breastfeeds another woman's child. The fact that breast milk is the best food for a child and the only alternative for his or her survival has been underlined since antiquity. Throughout the ages, women breastfeeding other women's children were frequently the only chance for the child's survival. Convictions and principles associated with breastfeeding that governed ancient cultures have been largely incorporated by modern societies. As breast milk composition was becoming explored, the uniqueness of this type of food was proven more and more frequently. The latest research on human milk composition delivers new evidence for the value of nutrient-rich mother's milk, whereas the role of the then wet nurses has been taken by donors of breast milk, which is stored in human milk banks.

Key words: breast-feeding, wet nurse, history

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INTRODUCTION

Human breast milk provides not only nourishment and protection against illnesses, but also offers security by creating conditions favoring care over a newborn baby [1,2]. For a neonate, the mother's milk is the food with the most appropriate composition, ensuring proper development and growth. The content of water, carbohydrates, lipids, protein and nutrients decides about its assimilability. Specific proteins protect from allergens, carbohydrates ensure controlled and optimal energy delivery, and fats warrant normal intellectual development and proper retinal structure [3,4].

In women whose pregnancies are for various reasons concluded earlier than expected, the mammary gland starts producing so-called premature milk. Its composition is significantly different from that of colostrum and transitional milk produced by women in whom lactation began at term. Protein content increases by 20%, fat content raises by 50%, and mineral salt content is greater by 50–80%. With the duration of lactation and slow development of a premature child, the composition of milk changes as well: it becomes the same as in women giving birth at term after a month. Immunoglobulin A is the only component of premature milk that persists at the highest level for three months. These compositional differences are dictated by natural needs of a preterm baby. The composition automatically adjusts itself to digestive capability of a child, and performs protective functions significant for the child's survival. Feeding colostrum to premature children also plays a significant role in antioxidant–prooxidant balance of the organism. Oxidative stress, to which an extremely immature infant is exposed, plays a decisive role in the processes of neovascularization, apoptosis and angiogenesis. Free radicals (reactive oxygen species) can act as inflammatory mediators by damaging lipid membranes or can promote cytokine release [5–8].

A high quantity of oligosaccharides warrants prebiotic activity of human milk. Growth fac-

tors, cytokines and chemokines have an impact on maturation, proliferation and growth of cells that participate not only in cell-mediated and humoral immunity, but also in the development of multiple hematopoietic lines. The role of cytokines is significant in the maturation of the function and structure of the neonatal small intestine and in the process of inflammation modulation in the later stages of life. Through activation of the white blood cell system: B-cells, monocytes, macrophages, mastocysts and eosinophils, as well as immature dendritic cells, cytokines begin to gain their chemotactic ability [9,10]. A neonate receives various antioxidants in breast milk, such as albumin, cysteine, bilirubin, uric acid, lactoferrin, glutathione and coenzyme Q10 as well as polyunsaturated fatty acids (docosahexaenoic acid, DHA) responsible for normal development of all body systems [11].

A HISTORY OF BREASTFEEDING

The oldest known written sources mentioning breastfeeding come from the Near East and date back to 3000 BC [12]. The necessity of breastfeeding was imposed on women since the oldest times [13]. Feeding milk to a neonate by a woman who was not the child's mother was exercised even during the time of the pharaohs. These women were frequently carefully selected from those undergoing lactation. Both the quality and amount of milk were evaluated [14]. In the times of the Roman Empire, as Soranus reports, human milk had to be evaluated prior to hiring a wet nurse and the evaluation repeated every now and then to observe potential changes that might have negative effects on the child's development [15]. Multiparous women at the age of 20–40 years with well-developed nipples were preferred. It was indicated that a wet nurse be intelligent, know basic principles of hygiene and be devoted to the breastfed child. Spartan women, known for their good health, discipline in bringing up children and ability to teach Greek, were the most valued [16]. Even though Soranus of Ephesus was not a supporter of hiring wet nurses in the postpartum period, his work "*Gynaikeia*" ("*Concerning female matters*") elaborates on traits of a good wet nurse. He claimed that the selection of a wet nurse was strictly related to future normal development of a child. He recommended Greek women [17,18]. In the Hellenistic period, Roman children were taught Greek in addition to Latin. That is why women of Greek origin were employed [19]. Moreover, a poetic description in "Odyssey" emphasizes a bond between a wet nurse and her breastfed child [21]. As medicine developed, Greek scholars devoted more and more attention to nutrition in childhood and properties of human milk. Ebers (1550 BC) recommended human milk as a remedy for various illnesses [20].

In ancient India, where pediatric medicine was quite developed, first human milk tests were described in the then journals, "*Susr Samhit*" (4–2 century BC) and "*Carak Samhit*" (AD). At that time, human milk was evaluated on the basis of its appearance and using a water solubility test in which a slight amount of milk was mixed with water and the homogeneity of dissolution was assessed. In the Roman Empire, there were several methods of testing human milk suitability. A "nail test" invented by Soranus was the best known and the most widely used. A drop of milk was placed on a nail, laurel leaf or an object with a similar surface. Milk was given a positive assessment and was considered of good quality if it spilled slowly and preserved its form of a drop when shaken. Fast spreading milk was considered too watery, whereas one that remained undispersed was deemed too dense.

Feeding milk to a neonate by a woman who was not the child's mother was exercised very early [22–24]. In the Jewish culture, breastfeeding women were rarely hired, and their services were used mainly as twins were born [25,22]. The practice of hiring wet nurses became more popular in approximately the second century AD, particularly in aristocratic circles. When hiring a wet nurse, attention was paid to her origin, education and knowledge of foreign languages [26,24]. Moreover, the development of trade and craft contributed to employment of wet nurses also in the working class [27–29].

Renaissance marks a return of wet nurses employment in higher classes of European societies. Lower social classes and women from the rural areas breastfed their children themselves for economic reasons. It was believed that colostrum was harmful for children. That is why, in this period, the services of a wet nurse were used. A belief that milk of women in the puerperium was less valuable and that a woman after an exhaustive labor was incapable of producing milk of full value was popular up to the end of classicism. It was only in 1699 when Michael Ettmüller began promoting colostrum as he believed that it helped pass meconium. In 1719, Pierre Dionis recommended the nouri-

shing colostrum and in 1776 Rosen von Rosenstein argued that it protected from illnesses [30,18]. In the 19th and 20th centuries, rich townsmen still employed wet nurses to the fashion of French aristocrats. In the second half of the 20th century, Kramszyk compared the death rate between children fed artificially, by wet nurses and by their mothers [31]. This was when the belief that, apart from benefits for children, breastfeeding might also be beneficial for mothers began to shape [32].

CONCLUSION

The period of the past 150 years was marked with changes concerning views about feeding infants [33]. The history of breastfeeding shows a number of cultural and economic aspects [34]. Contemporarily, the term "wet nurse" may be encountered during adoption of a neonate when establishing re-lactation (re-starting or inducing lactation) [35], or when using milk from human milk banks.

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