REVIEW ON THE RECIPROCAL RELATION BETWEEN BREAST FEEDING AND GASTROENTERITIS

An Essay

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M.Sc. Degree in Pediatrics

By

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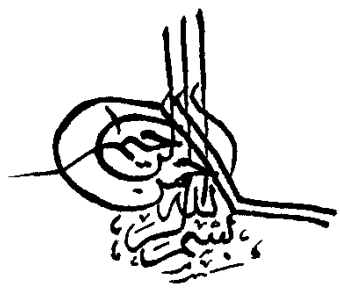
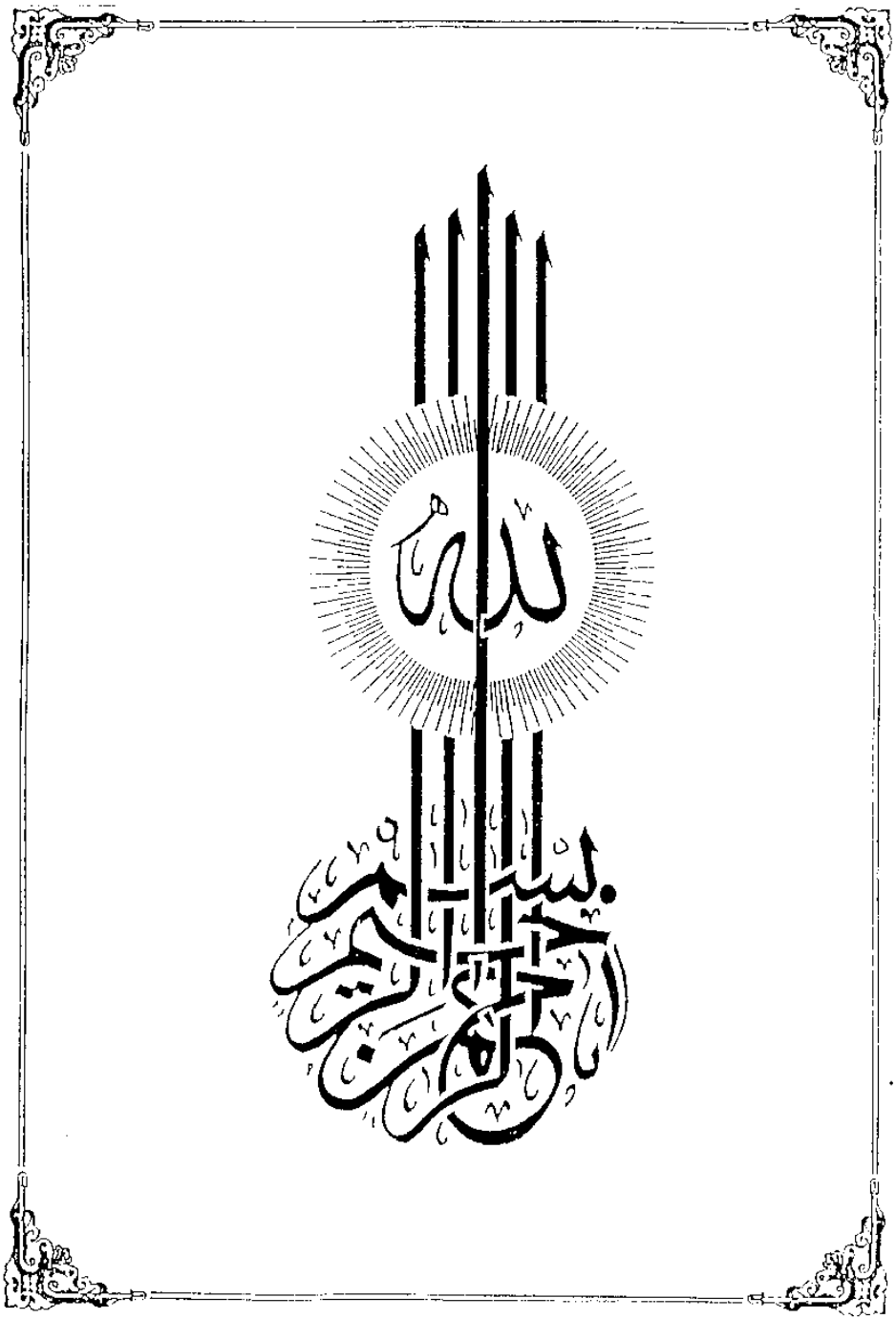


«والوالدات يرضعن أولادهن حولين كاملين لمن أراد أن يتم الرضاعة» . صدق الله العظيم .

«سورة البقرة الآية ٢٣٣»



TO MY DAUGHTER, WIFE,

AND PARENTS ....

CONTENTS

LIST OF ABBREVIATIONS

- E. coli	Escherichia coli
- G.E.	Gastroenteritis
- IgA	Immunoglobulin A
- IgG	Immunoglobulin G
- IgM	Immunoglobulin M
- NCDDP	National Control Diarrheal Project
- NHM	Normal Human Milk
- SIg	Serum immunoglobulin
- WHO	World Health Organization

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INTRODUCTION AND

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Breast feeding is the safest and most healthy way of feeding the infant. Unfortunately, about 25 years ago a trend away from breast feeding and towards bottle feeding began in the developing world. Often the result was contaminated formula improperly diluted, leading to diarrhea and malnutrition.

Recognizing that the widespread use of artificial infant feeding significantly contributes to morbidity and mortality from diarrhea, the World Health Organization (WHO), United Nations Children's Fund (UNICEF) and various governments have instituted strong measures to encourage breast feeding and discourage artificial feeding.

This essay is aimed to outline the effect of breast feeding in prevention and control of gastroenteritis as well as pointing to the rare situations by discontinuation of breast feeding temporarily or permanently.

BREAST FEEDING

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Historical Review:

Breast feeding has been the principal mode of feeding infants all over the world from the beginning of the history of man until the twentieth century. It should be born in mind that in old days there was no alternative to breast feeding, few infants if any survived unless they were breast fed. The employment of a wet nurse was the only alternative, when the mother was unable to breast feed (Hambraeus, 1977).

Nevertheless, breast feeding has progressively been replaced by bottle feeding during the past, however, and more especially in the past twenty years (Park, 1971).

In the nineteenth century, Pièrre Buding, at the maternité of Paris, began to use Cow's milk when mother's milk was not available (Jelliffe and Jelliffe, 1975). The use of powdered cow's milk in infant feeding, for the first time, was in England in 1902 (Wiches, 1952).

In 1978, the American Academy of Pediatrics intensified the promotion of a return to breast feeding, because of the apparent superiority of human milk over other infant milk formulas (Gilberto et al, 1985).

Value of Breast Feeding:

Breast milk is always available at the proper temperature and is perfectly balanced biologically, chemically and physiologically. It contains the proper amounts of carbohydrates, proteins and fats (Abbassy, 1981).

In developing countries, modern research endorses the evidence that breast feeding is not only the most natural, but also the safest, most economic and the most healthy way of feeding the infant, both physically and psychologically for both mother and offspring (Jelliffe and Jelliffe, 1979).

A working group appointed by the Norwegian Ministry of social affairs in its report (1985) recommended that:

* Breast feeding should be initiated immediately after delivery, as early initiation of breast feeding has been shown.

* Demand feeding should replace scheduled feeds.

* No routine supplementary feeding of infants in between or after breast feeds and more use of human milk as a supplement when necessary.

* Rooming-in (i.e. the infant staying in the

mother's room for the whole or most of the days) should replace nursery. Rooming in gives the mother access to the baby at all times, thus facilitating unlimited demand feeding (Helsing and Kjoernes, 1985).

Breast milk alone is sufficient to ensure adequate growth for the first several months, and in fact an early diet of breast milk provides infant's nutrition (Silver et al., 1983).

All efforts must be directed to encourage the breast feeding practice. It was noticed that, breast fed infants had a lower incidence of diarrhea, lesser degree of dehydration and better nutritional status than other infants (Hagras, 1987).

Superiority of human milk has many facets; from built-in host defence factors and digestive enzymes to a well-balanced and uniquely packaged supply of amino acids, fat, carbohydrates, minerals, and vitamins (Lonnerdal and Forsum, 1985).

Human breast milk has the ideal composition of the various essential nutrients, and perhaps also the non-essential nutrients necessary for optimal growth, development and maturation (Hambraeus, 1977).

The newborn infant is in a state of rapid develop-

ment and maturation; growth rate is most rapid during the first 4 to 6 months of life. This results in a high demand for the availability of specific essential nutrients. Nutritional requirements are thus most critical during this period; nutritional inadequacy might cause prolonged and sometimes irreversible effects on growth and development and adult physiological function (Cravioto et al., 1974).

Breast milk has a prophylactic property against the early development of atheromatous arterial lesion as it was reported in the last 10 years (Badrawy, 1973).

The investigations have suggested that human milk may contain a "mucosal growth factor" which facilitates the early maturation of the gut (Walker, 1985).