

Letter to the Editor

Ramadan Fasting and Breast Milk

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RAMADAN, THE NINTH Arabic lunar month, is the holiest month of Islam. Throughout this month Muslims refrain from eating, drinking, smoking, or having sexual contact during the day. Every year Ramadan advances by 11 days and hence depending on the season the duration of daily fasting varies annually. In summer fasts are longer, while in winter these are shorter. Ramadan's effects on nutrition, body weight, and sex hormones resulting from dietary and sexual abstinences are well researched.

Sick patients and travelers on long journeys are not obliged to fast during Ramadan; however, they must make up any missed days when they resume normal life.¹ Ordinarily lactating women are required to fast during this month but they are excused from fasting if there are good reasons to believe that fasting would cause any harm to themselves or their babies.² Despite this flexible commandment a great number of breastfeeding women are known to fast in Ramadan; for example, in Turkey a record proportion of lactating women (up to 69%) fast during Ramadan, most of whom are literate to a good standard.³

A few groups of investigators have tried to explore the effects of Ramadan on the composition of breast milk but ended up with variable results. Prentice and colleagues (1984) studying the quality of breast milk in 10 fasting Gambian women concluded that the ionic

composition and osmolality of the milk could change due to water abstention in Ramadan.⁴

Investigators from Arab Emirates reported that except for an insignificant variation of lipids there was no significant difference in the composition of major nutrients in breast milk before and after Ramadan.⁵ However, the study did not look at the effects of fasting on trace elements in breast milk.

A team of Turkish investigators claimed in a recent paper that, although the quantity of macronutrients in the breast milk remains virtually unaltered, some of the micronutrients such as zinc, magnesium, and potassium can decrease significantly if the nursing women fast during Ramadan. Additionally the researchers tried to demonstrate that the infants fed on such milk could have significant weight gain immediately after Ramadan.⁶ Though the results are seemingly fascinating, the study is fraught with several inconsistencies and ambiguities. The authors did not state the year of conducting the study, although this information is vital for the interpretation of their results; also they did not document consent procedures in the paper. Furthermore, it was shown in the paper that 2- to 5-month old babies fed breast milk and supplemental foods gained on average 1550 g over 30 days (i.e., 51.7 g/day), whereas normal infants of similar age gain much less than this (~650 g) over the same period.

Available research works are not sufficient to assist practitioners to have sound understanding of Ramadan's effects on breastfeeding. More research works need to be inspired on this subject. A well-designed prospective study of good sample size that involves successive analyses of breast milk at a regular interval (e.g., every 10 days) before, during, and after Ramadan could answer important questions regarding the effects of Ramadan on the composition of breast milk. Serial observations of the children's growth parameters, and biochemical and hematological indices will help to explain the queries in relation to the effect of Ramadan on infant nutrition and growth.

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