RESEARCH LETTER

Infant Feeding Practice of Premastication: An Anonymous Survey Among Human Immunodeficiency Virus–Infected Mothers

The information on premastication (prechewing) as a complementary feeding practice in the United States is incomplete. Its extent among human immunodeficiency virus (HIV)–infected caregivers has never been studied.[1] Alarmed by a report of 3 HIV-infected infants that discussed premastication as a potential route of transmission,[2] we aimed to describe the prevalence of this feeding practice among HIV-infected mothers and their children attending the pediatric infectious diseases clinic at the Bronx-Lebanon Hospital Center, Bronx, New York, which serves an urban population with one of the highest HIV-infection prevalence rates in the United States.[3]

Methods. Between August 2009 and October 2009, HIV-infected mothers in the clinic waiting area were asked to complete an anonymous standardized questionnaire. The specific question concerning premastication was designed after a similar question used in the Infant Feeding Practices Study II questionnaire.[4] The study was approved by the hospital's institutional review board. Factors associated with premastication were investigated using the χ^2 test and logistic regression. Data were analyzed using Stata version 10.0 statistical software (StataCorp LP, College Station, Texas). Statistical significance was set at $P < .05$, 2-tailed.

Results. Ninety mothers completed the questionnaire during the study period. A total of 17 mothers (19.1%) (95% confidence interval, 11.5%-28.8%) had ever fed premasticated food to their children. The practice of premastication was more commonly observed among African American mothers and among immigrant mothers from Africa compared with Hispanic mothers (**Table**). Mothers who had received premasticated food as a child were more likely to have applied this practice to their own children compared with mothers without such childhood experience (Table). In the adjusted analysis, only this variable remained associated with having ever used premastication as a complementary feeding practice (odds ratio = 7.0; 95% confidence interval, 1.7-29.4).

Table. Characteristics of All Mothers Completing the Questionnaire Asking Whether They Have Ever Given Premasticated Food to Their Children

Variable	No. (%)[a] All (n=90)	Yes (n=17)	No (n=72)
Age of mother, y			
≤24	13 (15.9)	2 (15.4)	11 (84.6)
25-34	22 (26.8)	4 (18.2)	18 (81.8)
35-44	35 (42.7)	8 (22.9)	27 (77.1)
≥45	12 (14.6)	1 (8.3)	11 (91.7)
Country of birth			
United Sates	61 (70.1)	11 (18.3)	50 (82.0)
Country in Caribbean region or Central American region	9 (10.3)	1 (12.5)	7 (87.5)
Country in Africa	17 (19.5)	5 (29.4)	12 (70.6)
Race/ethnicity[b]			
Hispanic	43 (53.1)	3 (7.1)	39 (92.9)
African American	21 (25.9)	8 (38.1)	13 (61.9)
African	17 (21.0)	5 (29.4)	12 (70.6)
Education, y			
<9	13 (17.6)	4 (30.8)	9 (69.2)
9-12	48 (64.9)	8 (16.7)	40 (83.3)
>12	13 (17.6)	1 (8.3)	11 (91.7)
Mother received premasticated food as a child[b,c]			
No or not sure	70 (78.7)	8 (11.6)	61 (88.4)
Yes	19 (21.4)	8 (42.1)	11 (57.9)

[a] Missing data were as follows: ever given premasticated food to their children, 1 mother; age of mother, 8 mothers; country of birth, 3 mothers; race/ethnicity, 9 mothers; education, 16 mothers; mother received premasticated food as a child, 1 mother. All variables were considered in the adjusted analysis.
[b] $P < .01$, unadjusted analysis.
[c] Significant factor ($P < .05$) determined from stepwise selection.

Comment. This study shows that feeding premasticated food to infants is a common practice among HIV-infected mothers in the Bronx. Mothers with childhood exposure to premastication were about 7 times more likely to ever have used this feeding practice compared with mothers who denied having received prechewed food as a child. Childhood exposure to premastication may have been difficult to remember for the respondents; hence, this variable may rather represent a proxy measure for the existence of premastication as a common feeding practice within the family. The small sample size might have limited the power to detect other significant predictors. Although we attempted to minimize selection bias by having the questionnaire available in English, French, and Spanish, the possibility of a social desirability bias in terms of not wishing to report premastication cannot be ruled out. Therefore, our survey might actually underestimate the true prevalence of premastication among HIV-infected mothers in the Bronx. A recent national study described a prevalence of 13.6% with an inverse relationship to education. However, this sample was not representative of the US population as it excluded non-English speakers, and mothers

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of minority groups and of low socioeconomic status were underrepresented.[5] Our results suggest that apart from African American mothers, premastication is likely to be a widespread practice among immigrant mothers from resource-limited countries where there might be limited access to safe processed food for infants.[6] In this context, feeding prechewed food to infants may provide them with potentially distinct nutritional and immunological benefits.[6] Apart from HIV, the feeding of premasticated food to infants has been previously hypothesized to be involved in the transmission of numerous other pathogens.[2,5,6] Therefore, health care providers involved in the health care of families affected by HIV should consider asking questions regarding premastication when discussing complementary feeding practices for infants and should offer advice about its advantages and possible risks.[7] Querying the infant's caregivers regarding the use of premastication during their childhood may help identify families who are likely to apply this feeding practice.

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1. Fein SB, Grummer-Strawn LM, Raju TN. Infant feeding and care practices in the United States: results from the Infant Feeding Practices Study II. *Pediatrics*. 2008;122(suppl 2):S25-S27.
2. Gaur AH, Dominguez KL, Kalish ML, et al. Practice of feeding premasticated food to infants: a potential risk factor for HIV transmission. *Pediatrics*. 2009;124(2):658-666.
3. Purswani MU, Hagmann S, Bakshi SS, et al. A blinded survey of the seroprevalence of HIV-1 infection in an inner-city adolescent and young adult population attending a community hospital in the United States. *J Adolesc Health*. 2007;40(2):182-184.
4. Centers for Disease Control and Prevention. Infant Feeding Practices Study II. http://www.cdc.gov/ifps/. Accessed August 14, 2010.
5. Fein SB, Labiner-Wolfe J, Scanlon KS, Grummer-Strawn LM. Selected complementary feeding practices and their association with maternal education. *Pediatrics*. 2008;122(suppl 2):S91-S97.
6. Pelto GH, Zhang Y, Habicht JP. Premastication: the second arm of infant and young child feeding for health and survival? *Matern Child Nutr*. 2010;6(1):4-18.
7. Panel on Treatment of HIV-Infected Pregnant Women and Prevention of Perinatal Transmission. Recommendations for use of antiretroviral drugs in pregnant HIV-1–infected women for maternal health and interventions to reduce perinatal HIV transmission in the United States. http://aidsinfo.nih.gov/ContentFiles/PerinatalGL.pdf. Accessed October 1, 2010.

In the life of children there are two very clear-cut phases, before and after puberty. Before puberty the child's personality has not yet formed and it is easier to guide its life and make it acquire specific habits of order, discipline, and work; after puberty the personality develops impetuously and all extraneous intervention becomes odious, tyrannical, insufferable.

—Antonio Gramsci, founder of Italian Communist Party

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