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Disclosure of potential conflict of interest: The authors declare that they have no relevant conflicts of interest.

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Available online January 31, 2012.  
doi:10.1016/j.jaci.2011.12.999

## Food protein-induced enterocolitis syndrome in an exclusively breast-fed infant—an uncommon entity

### To the Editor:

We read with interest the report by Monti et al<sup>1</sup> of the only published case of food protein-induced enterocolitis syndrome (FPIES) triggered by cow's milk protein in breast milk. We can also report a case of acute soy FPIES in an exclusively breast-fed infant.

At age 5 months, the infant received his first bottle of soy formula. Two hours later, he developed profuse vomiting, pallor, and diarrhea. A peripheral blood neutrophilia ( $6.7 \times 10^9/L$ ; normal  $0.5\text{--}4.4 \times 10^9/L$ ) was noted following the administration of intravenous fluids. Two weeks later, after drinking soy formula again, he developed profuse vomiting and pallor 2 hours later.

At age 6 months, the infant remained exclusively breast-fed. One evening, the infant's mother consumed a large serving of soy ice cream for the first time, having previously consumed soy only in processed foods. The child was not breast-fed overnight. Twelve hours later, the mother breast-fed the infant, and 3 hours after the feed, the infant developed profuse vomiting, pallor, and cyanosis and became floppy. The infant was evaluated in our clinic, the skin prick to soy was negative (0 mm), and a diagnosis of soy FPIES was made.

Unlike the case described by Monti et al,<sup>1</sup> our case did not have clinical features consistent with chronic FPIES despite the mother continuing to ingest soy in processed foods. Soy isoflavones are soy proteins found in high concentration in soy foods and are reliable biomarkers of human soy consumption.<sup>2</sup> Excretion of isoflavones into breast milk occurs in a dose-dependent manner, and peak concentrations occur 10 to 14 hours after soy ingestion.<sup>2</sup> We speculate that our case had FPIES after a breast-feeding since the mother ingested a large quantity of soy and soy excretion in

breast milk was at a time when peak concentrations are reported to occur.

Our unit recently published our 16-year experience of FPIES.<sup>3</sup> We collated further unpublished data whether the pediatrician or allergist had recommended exclusion of the triggering food from the maternal diet. Of the 34 mothers, 21 lactating mothers were instructed to continue to eat the implicated food, in 7 cases it is unclear what advice was given, in 3 cases the infants were not being breast-fed, and in only 3 cases the mother was told to exclude the food trigger in her diet. Although we cannot determine how many of the 21 mothers continued to eat the triggering food, no infant represented to our clinic with a history of breast-milk-induced FPIES. Over the last 3 years (2008–2011), we have evaluated a further 21 breast-fed infants with a history of acute FPIES. No acute FPIES case occurred following a breast-feeding, and in all cases, mothers were eating the implicated food before the initial FPIES reaction without adverse consequences.

Since food protein(s) in breast milk are detected in variable minute amounts,<sup>4</sup> FPIES triggered by food proteins in breast milk appears to be uncommon, and FPIES to multiple food protein(s) can occur,<sup>5</sup> we would only advocate the removal of the trigger food(s) from the maternal diet if there is a supportive history of breast-milk-triggered reactions.

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Disclosure of potential conflict of interest: The authors declare that they have no relevant conflicts of interest.

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Available online January 31, 2012.  
doi:10.1016/j.jaci.2011.12.1000

## Reply

### To the Editor:

We read with great interest the comments by Tan et al<sup>1</sup> regarding our case report of an exclusively breast-fed infant with food protein-induced enterocolitis syndrome (FPIES) to cow's milk proteins.<sup>2</sup>

In our 11 years of experience with 24 infants with proven FPIES (unpublished data), we observed 6 infants with a clinical onset similar to the one described by Tan et al: all 6 were breast-fed until the onset of the syndrome, which occurred at the first direct introduction of the triggering food into their diet (cow's milk in 4 cases, rice in 1 case, and both cow's milk and rice in 1 case). All the lactating mothers were on an unrestricted diet. Unlike Tan et al, we decided to remove the triggering foods from the maternal diet in the cases of 4 infants with severe symptoms;