

LETTER TO EDITOR (VIEWERS' CHOICE)

A BEEF CASE: A SHORT REPORT OF FOOD PROTEIN INDUCED ENTEROCOLITIS SYNDROME

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A 6 months old girl presented with lip swelling and food refusal immediately after the ingestion of roast beef. This was followed by multiple episodes of diarrhea, vomiting, an urticarial rash and lethargy. An initial diagnosis of an allergic reaction or infective gastroenteritis was made. It was noted that 2 months previously she had a similar episode which also occurred after a meal of roast beef. Previously, she had been treated for gastroesophageal reflux disease, eczema and had been diagnosed with cow's milk protein allergy. Secondary to this, cow's milk protein was fully excluded from her diet. There was no neonatal history of note and her development was normal. The only significant family history consisted of maternal atopy. On presentation, she had hypovolemic shock and required fluid resuscitation. On day 2 of admission, she continued to vomit and developed bloody diarrhea. A possible diagnosis of food protein induced enterocolitis (FPIES) was considered at this stage. On day 4, she began to tolerate oral rehydration solution and oral feeds without vomiting and was subsequently discharged. As she had consumed other new food products/brands on the day she presented, individual food challenges to chicken and several vegetables were carried out. As these did not produce any adverse effects, she is currently following a diet excluding beef and cow's milk only and a food challenge to beef is planned for the future.

FPIES is the most severe form of cell mediated, non immunoglobulin E (IgE) mediated food hypersensitivity diagnosed in infancy, triggered by the ingestion of certain food proteins. (1) The major features of FPIES were first described by Powell in the 1970s where the main allergenic proteins identified were cow's milk and soy. (2) However there have also been case reports of other solid food proteins associated with this condition including grains, poultry, fruit and vegetables, lentils, fish and eggs although these are less well recognized. (1) The actual incidence and prevalence of FPIES especially to solid food is not truly known due to the variability in presentation and non-specific diagnostic investigations. (3) Family history of atopy or food allergy seems to be a common finding. (3) Several factors increase the risk of food allergy in the first month of life including decreased gastric acidity, decreased activity of intestinal enzymes and immaturity of both the intestinal barrier and immune system. Therefore, FPIES may be a result of defects in both the barrier and in the immune function during this apparent window of immunological susceptibility. (1) Initially infants can either present with chronic disease while the food allergen is continually being ingested or they can present acutely if the food allergen has been removed from the diet but then subsequently reintroduced. Typical symptoms include profuse vomiting and diarrhea. Other common symptoms include lethargy, pallor, weight loss, dehydration with progression to hypothermia and in up to 20% of cases hypovolemic shock. (3) Criteria to diagnose FPIES include (4) age <9 months at initial presentation, recurrence of similar signs and symptoms on repeated exposure to the food

protein occurring within 24 hours of ingestion, no other cause found and resolution of signs and symptoms on removal of the food protein from the diet ± elicitation of the same signs and symptoms by standardized oral food challenge. We had similar findings in our patient except she has not been re-challenged with beef.

Thus we conclude that clinicians should also be aware that foods other than cow's milk and soy may elicit symptoms of FPIES with solid food proteins often implicated. Early recognition and diagnosis of FPIES will therefore ensure appropriate management of this condition, will reduce the risk of repeated reactions and reduce the length of admissions for these infants.

Contributors list: AS did literature review and writing of the report. SK did initial conception, design and writing of the report. JM managed the case and did editing and revision of the report.

Funding: None

Competing interests: None

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**DOI: 10.7199/ped.
oncall.2014.12**



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