

## **Food protein-induced enterocolitis syndrome to mussels in three Danish adults**

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### **Background:**

Food protein-induced enterocolitis syndrome (FPIES) is a non-IgE mediated food hypersensitivity, well described among paediatric patients. We present three adults with possible FPIES.

### **Case 1:**

38-year old woman with known grass pollen allergy, was referred because of two episodes of sudden stomach pain, vomiting and diarrhoea after intake of mussels. There was no skin, mucosal, respiratory or cardiovascular symptoms. The symptoms started approximately 20 minutes after intake of mussels and resolved within 24 hours.

Prick-to-prick skin tests (SPT), specific IgE (ImmunoCap) and open titrated food challenge were performed. SPT and food-specific IgE for fish, shellfish and molluscs were all negative.

Total IgE: 246. Basal serum tryptase: 2,9 kU/L.

Titration oral food challenge test with mussels was performed and reproduced symptoms of stomach pain and pallor followed by vomiting and diarrhoea 2½ hours after a cumulated dose of 5,1 g.

### **Case 2:**

27-year old woman with known allergy against birch- and grass pollen, dog and cat.

She reported four separate episodes of abdominal pain, repetitive vomiting and diarrhoea after intake of mussels, without skin, mucosal, respiratory or cardiovascular symptoms. Onset of symptoms was 2-4 hours after ingestion and resolution of symptoms approx. 3 hours after onset. The patient observed a dose-response relationship between the amount of mussel ingestion and severity of symptoms.

Skin Prick Test (SPT) were positive for birch pollen, grass pollen, dog and cat. SPT and specific IgE with oysters, mussels and scallops were all negative. Total IgE: 429.

The patient declined food challenge test, because of the severity of the gastrointestinal symptoms.

### **Case 3:**

54-year old woman, with known food allergy to buckwheat, reported two episodes of repetitive vomiting, lethargy and pallor, approximately one hour after ingestion of mussels. No involvement of skin, mucosa, respiratory or cardiovascular systems. The symptoms resolved within 24 hours.

SPT and specific IgE for fish, shellfish and molluscs were all negative

Total IgE: 13, basal s-tryptase: 3,3

The patient declined challenge due to fear of reaction.

### **Conclusion:**

FPIES is a rare, non-IgE mediated food hypersensitivity reaction, primarily diagnosed in children where it can be severe, but the condition is rarely reported in adults. We report three cases of repeated reactions consistent with FPIES to mussels in adult women. In the literature FPIES in adults is most commonly elicited by seafood and eggs.

We suggest to consider FPIES as a differential diagnosis in adult patients presenting with repeated episodes of acute onset of gastro-intestinal symptoms to specific foods in the absence of skin, respiratory or cardiovascular manifestations and no relevant sensitization.