CROHN´S DISEASE

Clinical relevance of IgG antibodies against food antigen in Crohn´s Disease: A double blind cross over diet intervention study

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Reference: Digestion 2010; 81: 252-264

QUESTION

The Crohn´s disease is an inflammatory bowel disease with unknown etiology. Food as a trigger of Crohn´s disease has long been discussed in literature. Can IgG antibodies against food be considered to play an important role in Crohn´s disease?

METHODOLOGY

79 CD patients and 20 healthy persons in a control group were examined for IgG. Afterwards, the clinical relevance of these food IgG antibodies was assessed in a double-blind cross-over study with 40 patients. Based on the IgG antibodies, an elimination diet was planned.

RESULT

In CD patients were increased quantities of food-specific IgG antibodies detected. A statistically significant reduction in stool frequency and abdominal complaints as well as an improvement of the general well-being compared to the control group was achieved when the CD patients complied with the specific elimination diet.

CONCLUSION

IgG antibodies against food play a role in Crohn´s disease and an exclusion diet can positively influence the course of disease and the patient´s well-being.

Digestion. 2010;81(4):252-64. doi: 10.1159/000264649. Epub 2010 Jan 30.

Clinical relevance of IgG antibodies against food antigens in Crohn's disease: a double-blind cross-over diet intervention study.

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Abstract

BACKGROUND: Environmental factors are thought to play an important role in the development of Crohn's disease (CD). Immune responses against auto-antigens or food antigens may be a reason for the perpetuation of inflammation.

METHODS: In a pilot study, 79 CD patients and 20 healthy controls were examined for food immunoglobulin G (IgG). Thereafter, the clinical relevance of these food IgG antibodies was assessed in a double-blind cross-over study with 40 patients. Based on the IgG antibodies, a nutritional intervention was planned. The interferon (IFN)gamma secretion of T cells was measured. Eosinophil-derived neurotoxin was quantified in stool.

RESULTS: The pilot study resulted in a significant difference of IgG antibodies in serum between CD patients and healthy controls. In 84 and 83% of the patients, respectively, IgG antibodies against processed cheese and yeast were detected. The daily stool frequency significantly decreased by 11% during a specific diet compared with a sham diet. Abdominal pain reduced and general well-being improved. IFNgamma secretion of T cells increased. No difference for eosinophil-derived neurotoxin in stool was detected.

CONCLUSION: A nutritional intervention based on circulating IgG antibodies against food antigens showed effects with respect to stool frequency. The mechanisms by which IgG antibodies might contribute to disease activity remain to be elucidated.

PMID: 20130407 [PubMed - indexed for MEDLINE]