GASTROINTESTINAL ALLERGY

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Food allergy was noted as early as 95 B.C. Hippocrates observed, "cheese is not well tolerated by all men," and Lucretius wrote, "one man's food is another man's poison." Since that early date numerous investigators have commented upon the manifestations of allergy as related to the gastrointestinal tract. Only recently, however, has the frequency with which this association occurs been fully appreciated. In 1934, Andresen[1] reported 544 cases with gastrointestinal symptoms, 25.7 per cent of which were due to food allergy. Others do not agree with this high incidence.

Gastrointestinal allergy usually is a manifestation of food or drug hypersensitivity. Oral pollen extracts also may cause gastrointestinal symptoms. The clinical picture is variable and persons of any age may be affected. It may occur alone or in combination with other allergic manifestations or other organic pathology.

Rowe[2] lists numerous symptoms of allergic reactions in the gastrointestinal tract, such as canker sores, distention, belching, epigastric heaviness, sour stomach, pyrosis, nausea, vomiting, diarrhea, mucous colitis, constipation, "gas in the bowels," pruritis ani, pain and soreness in various sections of the abdomen, and general symptoms of instability, fatigue, and nervousness. As the symptoms are variable, a definite or characteristic clinical picture not always is observed. The indefinite symptomatology makes the diagnosis more difficult. Any of the various portions of the gastrointestinal tract may be involved and the symptoms may simulate certain acute surgical conditions. When subjected to surgery, patients with gastrointestinal allergy usually demonstrate no definite pathology. However, Osler[3] found local areas of edema in the bowel wall at operation in patients with acute abdominal angioneurotic edema.

Except for the uncommon case of definite history of reaction following the ingestion of specific foods, the diagnosis of gastrointestinal allergy still must be primarily one of exclusion. If there is evidence of an associated personal allergy or a family history of allergic disease, the supposition of a possible allergic etiology to the gastrointestinal symptoms is strengthened. Sensitization studies may yield valuable information. The proof of correct diagnosis, however, depends upon the patient's response to the program of allergy management. Such a program involves specific dietary restrictions, the avoidance of the reacting inhalant allergens and hyposensitization to these inhalants, as well as general medical supervision. It must be emphasized that simple dietary restriction alone often is not sufficient to restore the deranged physiology of the gastrointestinal tract to normal. Cooperation between the allergist

and the gastro-enterologist, with careful bowel management and specific food restriction, often is necessary before a satisfactory response to treatment is obtained. The bowel management program consists not only of the re-establishment of normal bowel physiology but also is a form of psychotherapy to relax and reassure the patient, a necessary prerogative to successful treatment in any medical problem. Complete and thorough investigation must be carried out to exclude organic disease.

The following case reports are of two patients who sought advise at the Clinic because of gastrointestinal symptoms. Both of these patients had other manifestations of allergy and in both instances, a good result was obtained by combining bowel management with a strict allergy regimen.

Case 1: A white woman, 39 years of age, complained of severe constipation, abdominal distention, gaseous dyspepsia, and nausea of eighteen years' duration. For fifteen years she had taken cathartics or enemas daily. A bowel movement gave partial relief. An appendectomy, treatment for "gastroptosis" and for disease of the gall bladder had provided no relief. Since the age of 19, she had been subject to recurrent unilateral headaches associated with nausea and vomiting. She had had chronic catarrh and nasal polypi for many years. There was no further evidence of personal or familial allergy.

General physical examination was essentially negative except for a slight pallor and edema of the nasal turbinates, and moderate tenderness in both lower quadrants of the abdomen.

A complete study of the gastrointestinal tract including roentgenographic studies, Ewald test meal, examination of the stools, and a proctoscopic examination, was entirely negative. Protein sensitization studies revealed positive reactions to many of the common inhalants as well as to several foods, including wheat and eggs.

The patient was placed on a program of rigid bowel management including allergic dietary restrictions based on the patient's history and in accordance with the findings on skin testing. She also was advised to avoid the inhalants to which she reacted. She did not follow instructions other than the avoidance of the specific inhalants mentioned. Nine months later she was unimproved. She again was placed on the original plan of management and was started on a course of hyposensitization with an extract consisting of the inhalant allergens to which she reacted. She followed instructions at this time and five months later she reported the best health she had experienced in years. The gastrointestinal symptoms, headaches and catarrh had practically cleared up. She had found that wheat definitely caused an increase in all of her symptoms.

Comment: This case, of course, is one of an irritable colon in a definitely allergic individual. A good therapeutic result was obtained by approaching the problem simultaneously from two points of view. The presence of an allergic factor in the production of the gastrointestinal symptoms seems to have been demonstrated because the patient ultimately noted an increase in symptoms after ingesting wheat.

Case 2: A 33 year old housewife complained of bowel trouble. Since childhood, she had been subject to constipation. This became more marked in the past few years, necessitating the use of frequent laxatives or enemas. For six months prior to examination she had considerable shifting, colicky, lower abdominal pain coming on about two hours after eating. During the past two

months she passed red blood and mucus with her stools. Milk and cream always increased the symptoms. Tomatoes and turnips caused excessive gas and borborygmi. She thought that paint fumes aggravated her abdominal symptoms. She had chronic catarrh, and she noticed that bromides caused a dermatitis. She also was subject to frequent hives and angioneurotic edema. Her family history was positive for allergy. One brother had hay fever and asthma, another had hay fever, and a cousin had asthma.

General physical examination revealed a moderate degree of tenderness over the cecum and the sigmoid colon, and a spastic anal sphincter with a healed fissure at the posterior commissure.

A roentgenogram of the colon was negative. Stool examinations revealed 2 plus occult blood on one occasion but subsequent examinations were negative. Proctoscopic examination revealed a melanosis of the sigmoid colon but no ulceration or other cause for the bleeding. Investigation of the urinary tract showed a moderate degree of hydronephrosis on the right which in the opinion of the examiner bore no relation to the patient's symptoms.

The patient was placed on bowel management routine and was followed for four months as an out-patient. There was slight improvement in her condition. She finally was hospitalized for two weeks for strict bowel management, section of the external anal sphincter, and for allergy investigation. Allergy studies revealed strongly positive reactions to many of the common inhalants and to many foods, including milk and wheat. Allergic dietary restrictions were incorporated into the plan of bowel management, and she was placed on a program of avoidance and hyposensitization to the inhalant allergen.

During the next six months the patient noted at least 75 per cent improvement in her gastrointestinal condition. She was almost free of hives but her nasal symptoms continued unabated. In the next three months, she had three acute attacks of abdominal pain, the last one strongly suggesting acute appendicitis. An appendectomy was performed and an acutely inflamed appendix was removed. She continued the program of management and three months later reported practically complete relief of the gastro-intestinal symptoms. She also stated that she experienced definite reactions upon attempting to liberalize her diet by adding the foods to which she reacted on skin testing. However, she was able to tolerate minimal amounts of wheat and milk. The nasal symptoms continued in spite of treatment.

Comment: This case demonstrates how complex the problem of gastrointestinal allergy may be. Bowel management alone did not control the symptoms. Organic pathology in the anus and later in the appendix were further complications. The good result in this case was obtained only by the close cooperation of the internist, the allergist, and the surgeon.

SUMMARY

The frequency of gastrointestinal allergy has been appreciated more in recent years. Because of the multiplicity of symptoms referable to the gastrointestinal tract which may be caused by both food and drug sensitivity, the diagnosis of gastrointestinal allergy often is difficult. A strong personal or family history of atopy adds to the possibility of an allergic factor in such problems.

Although protein sensitization studies may provide valuable information, the final proof of relationship between allergy and certain gastro-

intestinal manifestations is in the response of the patient to a program of allergy management.

A thorough investigation to exclude organic disease is a necessary part of the diagnostic and therapeutic program.

The management of such problems must be shared by both the gastroenterologist and the allergist if a good result is to be obtained from treatment.

Two cases of gastrointestinal allergy which emphasize the complex character of such problems are reported in detail.

References

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