

# PROCTOSCOPIC OBSERVATIONS IN GASTRO- INTESTINAL ALLERGY

## *Report of Two Cases*

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### INTRODUCTION

Recent discussions concerning gastro-intestinal allergy prompted us to investigate methods whereby we might make direct observations of the character of the reaction produced when an allergen comes in contact with the mucosa of the gastro-intestinal tract. We were concerned not only with the local area involved but also with the symptom-complex resulting from such a reaction; namely, abdominal cramps, diarrhea, constipation, nausea and vomiting, pyrosis, etc. Four clinical methods of approach to this investigation were roentgenographic, gastroscopic, endoscopic through a fistula or in colostomy, and proctoscopic. The two case reports are concerned with the proctoscopic approach.

The two cases cited present findings typical of the proctoscopic approach to sensitization study. The technic entailed tap water enemas the night prior to examination. On the morning of examination, the proctoscope was introduced with a minimal amount of a non-irritating water soluble lubricant. The character of the rectal mucosa was noted and the rectal valves were identified as test sites. The allergens were applied in powdered form, using that amount which would adhere to the end of the cotton applicator. The tests were read in from five to twenty minutes, depending upon the rapidity of the reaction, and were graded from 1+ to 4+, according to the amount of erythema, edema, engorgement of the vessels, and hemorrhage present. Any symptoms resulting from the test such as cramps or lower abdominal distress were recorded.

### CASE REPORTS

*Case 1:* A thirty-five year old white woman who was first observed in July, 1939, complained of recurrent colds, bronchial asthma, recurrent urticaria, nasal obstruction, and frequent attacks of indigestion. She was subject to repeated head colds which were followed by asthmatic attacks on the average of once a month. She incriminated chocolate, onions, and certain other foods as causing her abdominal distress. Her gastro-intestinal symptoms were characterized by a "stomach full of gas and abdominal cramps." The family history of allergy revealed that a brother had hay fever.

Upon physical examination, the only significant findings of clinical value were scattered musical rales throughout both lung areas. Routine laboratory studies were non-contributory.

Endermal tests revealed positive reactions to many inhalants, molds, and bacteria, and definitely positive reactions to certain foods. However, the patient failed to react to onion or chocolate.

Chocolate and onion were selected for proctoscopic sensitization study because they had been incriminated by the patient, and had not reacted significantly by skin testing.

The allergens were applied to the rectal valve (in the manner outlined above) and five minutes later the patient complained of a "stomach full of gas and cramps." At this time the test sites were observed; there was no reaction to onion but a frank erythema in the area of the test with chocolate extract. The patient continued to complain of distress. The tests were checked at the end of fifteen minutes. The chocolate site revealed frank erythema, with some associated edema, and was classified as a 2+ reaction.

Her symptoms persisted for from two to three hours and required several enemas for relief. A program of management was outlined which included the elimination of chocolate from her diet.

*Case 2:* A twenty-nine year old white woman was first observed on February 5, 1939. She complained of persistent colds with associated cough for two months and generalized weakness and fatigue for six months. She described her condition as "run-down with no appetite and indigestion for the past six months." Her constipation over a period of two years was sufficient to require daily laxatives or enemas.

During the summer of 1938, she had experienced diarrhea with associated mucus, and bright bloody and watery stools. At that time she was told by a proctologist that she had "cryptitis and internal hemorrhoids." A hemorrhoidectomy was performed but did not control her rectal distress. The patient continued to have symptoms of gas and bowel distress varying with her diet, and she found it necessary to use frequent enemas in order to obtain relief.

Her nasal symptoms started in December, 1938, with a head cold, a non-productive cough, sore throat, and a daily elevation of temperature reaching 99.6° F. over a period of several weeks. She also reported a loss of thirty-one pounds during the previous six months. The patient stated that twelve months ago, she had had a bilateral otitis media with a mild chronic discharge over a period of months. Four weeks prior to her coming to the Clinic, she had an attack of influenza with high fever, associated with a "cloudy right maxillary sinus."

Her abdominal distress during the six months prior to observation was characterized by epigastric pain and fullness, coming on usually an hour after meals. Her symptoms were aggravated by cabbage and fried foods, and were relieved by baking soda. Occasionally she experienced nausea, but no vomiting.

During the past year she had had recurrent right sided headaches which were not associated with her menstrual period, and with no accompanying nausea or vomiting.

She gave a history of urticaria and tightness in the chest associated with wheezing. The family history was strongly positive for manifestations of allergy and, in addition, the patient had three children with perennial allergic rhinitis.

The physical examination revealed the nasal mucosa to be somewhat edematous and pale gray in character. The rest of the examination was essentially negative.

Proctoscopic examination revealed a dark brown, somewhat granular mucosa which was characteristic of the habitual use of cascara cathartics. The sigmoid colon was very spastic, and there was no evidence of ulceration.

## OBSERVATIONS IN GASTRO-INTESTINAL ALLERGY

The laboratory studies showed a blood eosinophilia of 4 per cent; 50° free acid and 70° total acid from the Ewald test meal; a negative undulant fever agglutination; and negative stool examination. Roentgen examination of the chest was normal. A gastro-intestinal roentgenogram revealed a normal stomach, duodenum and gall bladder, but a somewhat spastic colon with marked hypermotility. A retrograde pyelogram was negative.

The patient had a complete allergy survey and showed significant reactions to a number of foods, inhalants, and bacteria. She was placed upon a simple diet such as is used in a program of bowel management and, in addition, was instructed to eliminate not only the foods she suspected, but also those to which she had given strongly positive reactions. A program of hyposensitization and avoidance was instituted over a period of months.

When the patient was observed two months later, she reported that she had appreciated a definite improvement in her gastro-intestinal symptoms since following the combined program of bowel management and allergy restrictions. Three months later, she reported that she had only slight abdominal distress and had shown a definite gain in weight. She had found that beef, spinach, and lettuce caused definite discomfort, and she also suspected eggs, asparagus, beets, and apples.

At this time, skin and proctoscopic sensitization studies were made after the rectal mucosa had been observed and found to be normal. The findings were as follows:

	<i>Skin Test</i>	<i>Proctoscopic Test</i>
Beef	negative	2+ localized erythema, and edema
Eggs	±	4+ localized erythema, edema and several ruptured vessels
Lettuce	negative	questionable reaction
Asparagus	+	+

Following the proctoscopic tests, the patient had slight abdominal and rectal distress with a feeling of spasm, and later developed severe cramps which lasted three to five hours. She required several enemas for relief. The incriminated foods were eliminated from her diet in conjunction with a program of restriction and allergy management.

The third observation was in February, 1940, at which time the proctoscopic tests were repeated. The mucosa was found to be normal and the following observations were made:

	<i>Skin Test</i>	<i>Proctoscopic Test</i>
Beef	Not done	negative
Eggs	"	2+ erythema and edema
Lettuce	"	2+ erythema and edema
Asparagus	"	negative

Following this test, the patient developed some mild lower abdominal cramps which lasted for from five to fifteen minutes. At this time, she reported that following the ingestion of a pudding containing egg, and also a lettuce salad, she had developed severe cramps which had necessitated the application of heat for relief. For a period of seven to eight months, the patient was relatively free of symptoms as long as she followed the program of management based upon the sensitization studies.

### DISCUSSION

The two cited cases illustrate the type of reactions which are experienced and observed in gastro-intestinal allergy when certain allergens are applied to the rectal mucosa. The local reactions were characterized by erythema, edema, and vascular engorgement which preceded the patient's abdominal distress.