New Considerations for a Common Medical Problem
Diarrhea after meals: A possible form of Unrecognized Maldigestion

People often complain of increased bowel movements, which are sometimes urgent or watery, and may occur at the most inconvenient times: when under major stress such as giving a talk, taking an exam, or if concerned about a loved one in the ER. However, diarrhea frequently occurs after eating a specific food or after eating something different and not while under stress at all. Since the cause is not clearly understood, physicians have labeled this condition as "irritable bowel syndrome" or "spastic colon", particularly when routine tests such as a colonoscopy or standard blood tests are normal. Patients are told "nothing is wrong", or "you have spastic colon", further investigation ceases, and patients are given medications to slow down the intestinal motility. These drugs, unfortunately, fall short of helping the patient. In fact, because of the existence of this "well established" diagnosis, most physicians feel that no further testing is necessary at all and encourage the patient to reduce their stress, a most unsatisfactory message for people who are experiencing the problem.

For a physician to establish the diagnosis of irritable bowel syndrome, standardized symptoms called the Rome III criteria are used. These require only that a patient experience recurrent abdominal pain or discomfort for at least 3 days per month in the last 3 months associated with 2 or more of the following:

a. Improvement with a bowel movement(s).
b. Onset of symptoms was associated with a change in the frequency of the stool(s) or
c. Onset of symptoms was associated with a change in the appearance of the stool(s).

Most importantly, these criteria do not inquire into what precedes the diarrhea such as eating. As a result of using them, physicians often miss the cases of maldigestion.

Case Report
The patient is a 43-year-old female who experienced episodes of diarrhea for approximately 11 years. The diarrhea episodes occured 2-3 times weekly, usually approximately 2-4 hours after eating either a spicy meal, corn, green beans, lima beans, oranges, cheese, salads, milk products, or something with garlic or tomatoes. She experienced increased severe cramping that was relieved after having 3-5 loose, or watery stools. Occasionally, if she ate late, she had bowel movements in the middle of the night. Her mother, a cousin and uncle on her mother's side, and a cousin on her father's side all had similar digestion problems. Since the patient had never had a colonoscopy, she was referred to a gastroenterologist. Her colonoscopy, colon biopsies, blood tests for celiac disease, and small bowel x-rays were all normal. The gastroenterologist diagnosed her as having "irritable bowel syndrome-diarrhea" and treated her with a probiotic. Her symptoms continued and she returned to see me. Subsequent testing showed she had difficulty digesting fat and she was started on pancreatic enzymes. She has now been using them for 18 months without further episodes of diarrhea.

Discussion
Many recognized gastroenterologists including Drs. Michael Camilleri (Mayo Clinic), Nicholas Talley (University of New Castle, Australia; and Mayo Clinic), and Saad Habba (Mt. Sinai School of Medicine, New York), have raised concerns over the reliability and usefulness of the Rome III criteria.

The question is then, ***"why does eating something result in the diarrhea in certain individuals if all of the usual testing is normal?"*** Space does not allow reviewing all of the possible diagnosis for diarrhea and instead, this paper will focus on the current possibility of a maldigestion syndrome due to the following conditions, all of which can cause diarrhea after eating and are not easily proven by current testing.

Bile Acid maldigestion

May occur whether the gallbladder is present or removed
Responds to treatment with bile acid binders
Some gastroenterologists suspect this may account for 30-60% of causes of diarrhea after eating.

Glucosidases maldigestion (also known as disaccharidases)

These are the enzymes in the small intestine that help to digest starches
Lactose intolerance is the best known (due to beta glucosidase deficiency)
1-2% of all children have an inherited sucrase-isomaltase deficiency
22% of children with recurrent abdominal pain syndrome (the equivalent of irritable bowel syndrome-D in adults) have a glucosamylase deficiency
Acarbose (a medication used to prevent the digestion of starches in diabetics to help lower blood sugar), works by preventing the normal function of the glucosidases and causes diarrhea and gas when taken.
Onions and garlic contain similar ingredients to acarbose.
Amylase (one of the ingredients in pancreatic enzymes) helps to increase the concentration of the glucosidases in the small intestine.

Pancreatic insufficiency

6% of patients with irritable bowel syndrome-diarrhea were recently found to have pancreatic insufficiency and their diarrhea resolved with enzymes.
15-25% of individuals with Type 2 diabetes may have a deficiency in the ability of the pancreas to produce the enzymes to digest starches or fats.

Summary

At the current time, it is important for patients to be aware that there are potential treatments available for those who are suffering with diarrhea or abdominal pain that is occurring after eating. In my practice, I have found a 82% improvement in symptoms with the use of pancreatic enzymes among patients who can identify a "food trigger". If that does not work, then patients are given a prescription for Welchol. I am just beginning to have patients try the over the counter enzymes, Essential Enzymes 500mg.

Essential Enzymes 500 mg (by Source Natural), an over the counter enzyme (1-3) before eating any "trigger meal" or daily as needed.

ZenPep 20,000 lipase (by Eurand Pharmaceuticals), a prescription drug (1-3) before eating any "trigger meal" or daily as needed.

Welchol 625 mg (by Daiichi Sankyo, Inc), a prescription drug (1-3) before eating any trigger meal or daily as needed.

I am happy to see patients who have this problem or consult with their physicians.

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