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CELIAC SPRUE

Celiac sprue (CS) is a disease of the lining of the small intestine. This part of the bowel lies between the stomach and colon, or large bowel. It is about 20 feet long and is where nutrients, calories, vitamins and minerals are absorbed into the blood. The inside lining of the small bowel has tiny microscopic finger-like projections called villi. It is through these villi that nutrients are absorbed.

CS is a genetic disorder, meaning that it can be passed through the genes from parent to child. It only occurs when the grain protein called gluten comes in contact with these villi. Gluten is present in wheat and all wheat products, barley, rye and, to a lesser extent, in oats. In celiac sprue, the gluten protein severely damages these delicate villi. In fact, the damaged villi are actually destroyed so that absorption of nutrients may be severely affected.

CS tends to be most common in people of northern European extraction. It can occur in infants or those of older ages. The body's immune and antibody systems are, in some as yet undefined way, important. Certain protein antibodies occur in the blood of patients and even their close relatives. CS is also known as celiac disease, non-tropical sprue, and gluten enteropathy or intolerance.

What Are The Symptoms?

In children, there may be irritability, diarrhea, nausea, vomiting, and failure to thrive or grow. The same symptoms may occur in adults, along with abdominal pain, weight loss, anemia or low red blood cell count, mood changes, joint and muscle pain, fatigue, skin rashes, and menstrual irregularity. Remarkably, some people may have no symptoms at all. Even with the damage to the small bowel, they seem to absorb enough nutrition to remain reasonably healthy.

The Diagnosis

The physician may suspect the disorder by the medical history and abnormal blood tests, such as a low red blood cell count. A more specific blood test for the disease is the endomysial antibody test. A biopsy of the lining of the small intestine is always needed. This is done by endoscopy where, under light sedation, a thin endoscope is passed through the mouth and on into the small bowel, where biopsies can be taken. When damage to the inside lining of the bowel is seen, the diagnosis is usually confirmed.

The Gluten-Free Diet

The treatment of CS is simple, yet difficult. Treatment of CS is diet---avoiding the gluten protein. This is easier said than done.

Wheat, rye, barley, and perhaps oats are the culprits. These grains, especially wheat, are part of almost every meal. They are present in many canned and prepared foods.

The patient must become a label reader to see if wheat in any form has been used. Furthermore, the patient, and especially the food preparer in the family, must understand the treatment goals. Instead of wheat flour, potato, rice, soy or even bean flour may be used. Specialty stores sell gluten-free breads, pasta, and other gluten-free products. Meat, fish, poultry, fruits and vegetables do not contain gluten and are good choices.

Patients with CS and their food preparer should see a registered dietician for several sessions to learn more about this complicated diet. Another source of information is the internet, where there are many support and chat groups as well as professional organizations that provide good information about this disorder (see Links section).

Eating out can be a challenge, as sauces and gravies are often made with wheat-based products. However, once known and understood, the diet can be fairly easy to follow, especially when a patient sees improvement in their condition when these dietary changes are undertaken.

The Response

Most patients have a good response to the elimination of gluten from the diet. A few are called non-responders and do not respond. Further testing and medications may then be indicated.

Celiac Sprue and Other Disorders

Since CS is a disorder of the immune system and the genes, it is not surprising to find that it is associated with other diseases that have similar links. These include: 1) dermatitis herpetiformis; 2) lupus; 3) diabetes occurring in childhood or requiring insulin; 4) rheumatoid arthritis and other immune-related disorders, often called collagen-vascular diseases.

Complications

There are certain complications known to develop with CS. Usually, these can be prevented by staying on a strict gluten-free diet. These include: 1) malignancies of the intestines; 2) osteoporosis; 3) failure to grow in height or weight; 4) deficiencies of minerals (iron) and vitamins which, in turn, can lead to convulsions when inadequate folic acid is absorbed.

Summary

Celiac sprue is a disorder that can be difficult to diagnose because of the many different symptoms it may produce. It can occur at almost any age. Making the diagnosis is fairly straightforward. The treatment of avoiding gluten protein in wheat, barley, rye, and perhaps oats is the difficult part. However, once mastered, it becomes a fairly easy diet to follow. Furthermore, the response to dietary treatment is usually so good that patients have no problem staying on this new eating program.

Support Links

Patients with celiac sprue can get support and information about their disease through the following contacts:

(1) Celiac Sprue Association/USA Inc.
(877) 272-4272
Website: http://www.csaceliacs.org

(2) Celiac Disease Foundation
(818) 990-2354
Website: http://www.celiac.org

(3) Gluten Intolerance Group of North America
(206) 246-6652

(4) National Center for Nutrition and Dietetics American Dietetic Association
(800) 366-1655