Peptic Ulcer Disease

Each year, approximately 350,000 people in the United States are diagnosed with a peptic ulcer. At any one time 4 million U.S. citizens suffer from peptic ulcers. What is a peptic ulcer? It is an eroded area of the mucosa (lining) of the gastrointestinal tract ¼ inch in size or larger. It is caused in 70 to 90% of cases by an acid loving bacterium called *H. Pylori*. These ulcers are commonly known as “stomach” ulcers although in fact the majority of them are found in the first part of the small intestine called the duodenum.

In the past these ulcers were thought to be due to smoking, spices, alcohol, coffee, stress, diet and even chewing gum. Most of these supposed causes have not been shown to significantly contribute to ulcers. Alcohol and stress do contribute to the severity of an ulcer at times. The main culprit is the *H. Pylori* bacterium. It grows well in an acid environment and causes erosion of the stomach or duodenal wall leading to further damage by the normal stomach acid and ulcer formation.

Use of non-steroidal anti-inflammatory drugs (NSAIDS) is the second leading cause of ulcers. NSAID drugs such as ibuprofen and Naprosyn result in damage to the normal mucous lining of the gut with the result that acid can cause damage.

Cancerous tumors account for about 4% of stomach ulcers. They generally are without symptoms until they have grown to a fairly large size.

Diagnosis of ulcers is most often made at gastroscopy. This is looking into the stomach with a flexible scope. Cultures and biopsies can be taken at the same time for the presence of *H. Pylori* or any abnormal areas which might indicate cancer.

Once diagnosed, ulcer treatment depends on the cause. If NSAIDS are involved they should be stopped. The patient is placed on an acid preventative medication such as a proton pump inhibitor (like Prilosec) or an H2 blocker (like Tagamet). *H. Pylori* is treated with a combination of two common antibiotics and an acid inhibitor. In some
cases Pepto-Bismol is also used. Treatment lasts 8 to 12 weeks to fully heal the ulcer even though the pain and burning may go away in 24 to 48 hours. Unfortunately this means that many patients feel better and stop their treatment before they are fully healed.

Surgical treatment of ulcer disease has a long and complex history. In the 1960’s and 1970’s the quality of a training program for surgeons was evaluated on the basis of the number of gastrectomies (removal of the stomach) a chief resident performed. There were many operations described for various ulcer problems. Medical therapies of the time were notoriously ineffective, and surgeons thought they had the answers. The identification of the role of *H. Pylori* in the mid 1980’s made much of this experience obsolete. The majority of patients today are medically treated. There remain three areas where surgery still plays a major role. These are perforation, hemorrhage, and cancer. If an ulcer penetrates deeply into the duodenal or gastric wall, it can perforate through. This results in spillage of air and intestinal contents into the abdominal cavity and becomes a surgical emergency. Most of these perforations are repaired by a simple surgical patch to the ulcer opening and the usual hospital stay is 3 to 5 days. Hemorrhage is also a serious complication. In this case an ulcer erodes into an artery usually the gastroduodenal artery, and the patient begins to pass blood in their stool or even vomit blood. This can either be a small amount or it can be massive bleeding and require immediate surgery with ligation (tying off) of the bleeding vessel. Ulcers caused by cancer also can require surgery. They may initially present with bleeding either minor or major. There may be weight loss or gastric distention and failure of the stomach to empty well. They are diagnosed by biopsy at gastroscopy and CAT scan. The treatment depends on the size and spread of the cancer. In most cases, a portion of the stomach and duodenum is removed along with the adjacent lymph nodes. Unfortunately, most gastric cancer carries a very poor long term outlook.

In summary, peptic ulcer is a relatively common problem which is most often treated medically. It is usually due to infection with a bacterium. In cases of perforation, bleeding or cancer surgical treatment may be required.
Questions or comments can be addressed to Frederick M. Ilgenfritz, MD, FACS, c/o Bitterroot General & Vascular Surgery, 1150 Westwood Drive, Suite C, Hamilton, MT 59840 or visit www.bgvs.us.