Peptic Ulcer Disease: A Case on the Digestive System

It's Friday morning and Sal Volpe is sitting in Dr. Lorraine's exam room, dozing after another night of disrupted sleep. When the doctor knocks and walks in, she finds the 66-year-old man looking exhausted and uncomfortable. Sal gets to the reason for his visit immediately: He's been suffering from "stomach aches" (dyspepsia) that wake him at night and nag him in between meals during the day. He describes his pain as gnawing, burning (maybe a 4 out of 10 on a pain scale) and points to the epigastric region of his abdomen. When he eats, he tells Dr. Lorraine, the pain goes away, but then he feels bloated and a little nauseated. The pain usually returns 2–4 hours later, depending on what he eats. Sal explains that he has had some pain relief from the over-the-counter drug Pepcid®(famotadine).

Dr. Lorraine proceeds with the history and physical exam. She discovers that Sal has a family history for gastrointestinal cancer and has unintentionally lost 10 pounds since his checkup a year ago. His epigastric area is modestly tender to palpation. She suspects a peptic ulcer (gastric or duodenal), but the weight loss and family history make it prudent to eliminate the diagnosis of stomach (gastric) cancer. "Mr. Volpe, I think you may have a stomach or intestinal ulcer," Dr. Lorraine says. "I suggest we perform an endoscopy to have a look. This involves passing a small tube with a small camera through your mouth and into your stomach. We can look at the wall of your stomach and small intestine, check for an ulcer, and remove a very small piece of tissue to test for infection. We call this a biopsy. We'll also test the biopsy for cancer because of your family history. But, I really think we're dealing with an ulcer here and not cancer."

Later that month, the endoscopy is performed and it confirms Dr. Lorraine's suspicions. Sal has a duodenal ulcer and infection with the bacterium *Helicobacter pylori* (*H. pylori*). This is not surprising since *H. pylori* is the cause of most peptic ulcer disease, particularly in the duodenum. Treatment involves complete eradication of the *H. pylori*with two different antibiotics, and a drug that decreases gastric acid secretion, a so-called proton pump inhibitor (PPI). Dr. Lorraine explains to Sal, "Mr. Volpe, you do not have stomach cancer, but you do have a duodenal ulcer caused by the *H. pylori* bacteria I was telling you about. Too much acid and inflammation from this infection is causing your pain. The good news is we can probably cure your ulcer by killing the bacteria, but you will have to take three different medications twice a day for 14 days. I'll see you again in 3 weeks; we can do a simple breath test to determine if the *H. pylori* has been successfully eliminated."