SL18

Antiulcer Drugs: Past, Present, and Future

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There are many drugs that are routinely used for the treatment of gastric and duodenal ulcers. Historically, pulverized shells ($CaCO_3$) have been purported to be the first medicinal therapy for peptic ulcers. Subsequently, the Sippy therapy, consisting of milk and antacids was devised. Black et al. developed the histamine H_2-receptor blockers metiamide and cimetidine. The antisecretory effect of H_2-blockers is very powerful, resulting in a markedly increased healing rate. Proton pump inhibitors (PPI) were next developed, achieving longer suppression of gastric acid secretion than H_2-blockers. Nonetheless, the relapse rate was similar for treatment with H_2-blockers and PPIs. In addition to acid and pepsin, *Helicobacter pylori* was also demonstrated to be involved in the gastritis development, peptic ulcer occurrence and relapse, and gastric cancer. Accordingly, antibacterial therapy was added to conventional ulcer treatment when patients were positive for *H. pylori* infection markers. Since a prototype for locally active antisecretory drugs was discovered, new classes of antisecretory drugs, to include CCK_2-receptor antagonists, represent the next target for drug development. In addition, non-antisecretory drugs that both accelerate ulcer healing and prevent relapse will likely be developed. Preliminarily, gene therapy also appears to be worthwhile, particularly for intractable ulcers.