Chapter 4
Medicinal Plants for Gastrointestinal Diseases

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ABSTRACT

Gastrointestinal (GI) diseases are those that affect the digestive tract. This may include sections from the esophagus to the rectum and the liver, gallbladder, and pancreas, associated digestive organs. Gastrointestinal diseases may be acute, chronic, or recurrent. Natural products show the potential ability to treat the causes and decrease the GI tract production systems. This chapter presents some of the medicinal plants that are used to treat and minimize signals of GI disease pathogenesis.

INTRODUCTION

Gastrointestinal diseases are diseases affecting food intake, drinking water, and general health. Gastroesophageal reflux disease (GERD), peptic ulcer disease (PUD), irritable bowel syndrome (IBS), functional gastrointestinal disorder (FGD), inflammatory bowel disease (IBD), ulcerative colitis (UC), are several popular forms of digestive diseases.

DOI: 10.4018/978-1-7998-4120-3.ch004

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Gastroesophageal reflux disease (GERD) is a widespread condition with a rate as high as 10%-20% in the western countries, less than 5% in Asia (Badillo & Francis, 2014). The disease has various symptoms such as clinically troublesome heartburn, regurgitation, chest pain. There are also other atypical symptoms including dyspepsia, epigastric pain, nausea, bloating, and belching, which may be related to GERD but overlap with other diseases. The protein targets of treatment for GERD are histamine-receptor (H2R) or proton-pump (Katz, Gerson, & Vela, 2013).

The annual incidence rates of peptic ulcer disease (PUD) are 0.10–0.19% physicians diagnosed PUD and 0.03–0.17% when based on hospitalization data (Sung, Kuipers, & El-Serag, 2009). The main symptom is stomach pain and some serious developing complications to individuals with PUD are such as gastroduodenal haemorrhage, perforation and obstruction, and mortality among patients with these complications is high. PUD is most commonly concerned with Helicobacter pylori infection and the use of nonsteroidal anti-inflammatory drugs (NSAIDs). The goal of most medicines is therefore close to GERD in addition to treating the etiology like antibiotics (Fashner & Gitu, 2015)

Irritable bowel syndrome (IBS) is a chronic gastrointestinal disorder, affects from 3–20% of the US population. In Vietnam, the incidence of this disease is about 15-20%, it is common in people between the ages of 40-60. Poor knowledge of the pathophysiology and causes of IBS is provided. IBS has no usual signs and it is characterized by a symptom complex of abdominal pain and irregular bowel behavior appearing that present as diarrhea or constipation, and general physical weakness in the absence of abnormal morphological, histological or inflammatory markers (Grundmann & Yoon, 2010). Several reports have lately demonstrated that the etiology of IBS is attributable in part to changes in the function of the nerves that feed the gastrointestinal tract, activation of the immune system and psychological causes. Enteric P2X receptors may affect gastrointestinal activities like propulsion and secretion, and the drugs acting at these receptors could be useful for treatment IBS (Galligan, 2004).

Dyspepsia is known simply to signify episodic or chronic symptoms of abdominal pain or nausea and linked to the upper gastrointestinal tract (Heading, 1991).

Functional gastrointestinal disorders (FGD) are common, accounting for up to 50% of gastroenterology referrals (Jackson et al., 2000). FGD is a condition whose symptoms may correlate with other functional gastrointestinal disorders like: nausea, vomiting, bloating, diarrhea, constipation, complicated food or fecal passage or some combination. Symptoms will be apparent for at least 12 weeks of the previous year to allow a diagnosis of a FGD. There are few exceptions — for example, persistent abdominal physical pain requires symptoms over six months, while other juvenile while anorectal conditions need symptoms only for a few weeks. The cause is not clear so most medicines treat symptoms primarily (Drossman, 1999).

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