



THE IMPORTANCE OF TREATING STOMACH AND DUODENAL ULCER DISEASE IN PHYTOTHERAPY AND ITS ANALYSIS THROUGH THE EXAMPLE OF MEDICINAL PLANTS

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Relevance. In modern medicine, one of the most pressing challenges is the increasing prevalence of gastrointestinal disorders, particularly gastric and duodenal ulcers. The primary etiological factor of these conditions is the bacterium *Helicobacter pylori*, which damages the protective mucosal barrier of the gastrointestinal tract, disrupts gastric acidity, and initiates inflammatory processes. Peptic ulcer disease is considered one of the most widespread internal pathologies, requiring a comprehensive therapeutic approach. The main objectives of treatment are pain relief, ulcer healing, prevention of complications, and reduction of recurrence, making this condition a highly relevant issue in contemporary healthcare.

Aim of the Study: To examine the effects of phytotherapeutic preparations containing *Achillea millefolium* (common yarrow), *Calendula officinalis* (marigold), and *Glycyrrhiza glabra* (licorice) in the treatment of peptic ulcer disease within phytotherapy.

Methods: To highlight the research, relevant scientific articles and literature sources were analyzed (Phytotherapy, 2023).

Results: Biologically active compounds play a crucial role in the treatment and recovery processes of gastric and duodenal ulcer disease. *Achillea millefolium* (common yarrow) contains flavonoids such as apigenin and luteolin, as well as tannins. These compounds exert anti-inflammatory effects by suppressing the release of inflammatory mediators. They may help reduce swelling in inflamed tissues and alleviate pain. *Glycyrrhiza glabra* (licorice) has long been widely used in both Eastern and Western medicine as a medicinal plant. Its diverse pharmacological properties are primarily associated with biologically active compounds found in its roots. The anti-inflammatory effects of licorice are mainly attributed to glycyrrhizin, which undergoes metabolic transformation in the body and exhibits corticosteroid-like activity. This occurs through the inhibition of inflammatory mediators such as prostaglandins and leukotrienes. Owing to these properties, licorice is applicable not only in respiratory diseases but also in conditions such as arthritis, dermatitis, and other inflammation-related disorders. Flavonoids of licorice (e.g., liquiritin, liquiritoside) together with glycyrrhizin are considered effective in the treatment of gastric and duodenal ulcers. They enhance the protective mechanisms of the gastric mucosa by stimulating mucus secretion, promoting prostaglandin synthesis, and potentially exhibiting activity against *Helicobacter pylori*. Additionally, licorice has mild spasmolytic properties that help relax smooth muscle spasms in the gastrointestinal tract. *Calendula officinalis* (marigold), commonly known as calendula, is another widely used medicinal plant in traditional medicine. Inflammation of the gastric or intestinal mucosa often leads to conditions such as gastritis and peptic ulcers. Flavonoids and triterpenes present in calendula help reduce inflammation by inhibiting the release of inflammatory mediators, thereby decreasing swelling and pain in the gastric and intestinal walls. Its antioxidant compounds (flavonoids and carotenoids) neutralize free radicals, protecting cells from damage and supporting mucosal



healing. Moreover, calendula has the ability to stimulate cell regeneration and increase collagen synthesis, which accelerates the healing of erosions and ulcers in the stomach and intestines.

Conclusion: The analysis of scientific articles and literature indicates that phytotherapeutic preparations containing *Achillea millefolium* (common yarrow), *Calendula officinalis* (marigold), and *Glycyrrhiza glabra* (licorice), when administered in appropriate doses and under medical supervision, are effective in both the treatment and prevention of gastric and duodenal ulcer disease.