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The Effect of Temulawak (Shu Gu Jiang Huang) Administration on Stomach Pain in Patients with Stomach Heat Syndrome at LKP Daun Mas

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Abstract

Background: Gastric disorders with stomach heat syndrome are prevalent digestive issues worldwide (World Gastroenterology Organization, 2021). Temulawak (Curcuma xanthorrhiza Roxb) contains bioactive compounds such as curcuminoids, xanthorrhizol, and sesquiterpenes, which exhibit anti-inflammatory, gastroprotective, antimicrobial, and analgesic properties (Ariyani et al., 2020; Riswanti et al., 2021). Objective: This study aimed to evaluate the effectiveness of Temulawak (Shu Gu Jiang Huang) in reducing gastric pain associated with stomach heat syndrome. Methods: A pre-experimental one-group pre-test post-test design (Sugiyono, 2021) was applied to 30 randomly selected patients at LKP Daun Mas (Sugiyono, 2020). Pain intensity was assessed using the Visual Analogue Scale (VAS) (Notoatmodjo, 2020) before and after the administration of Shu Gu Jiang Huang. Data were analyzed using the Wilcoxon test to determine statistical significance. Results: Findings revealed a significant decrease in pain levels (p = 0.000), with most participants reporting moderate pain before the intervention (63.3%) and mild pain afterward (93.3%). These results confirm the substantial analgesic and gastroprotective effects of Temulawak. Conclusion: Shu Gu Jiang Huang significantly alleviates gastric pain in patients with stomach heat syndrome, suggesting its potential as an effective complementary therapy within Traditional Chinese Medicine practice.

Keywords: Temulawak, Shu Gu Jiang Huang, gastric pain, stomach heat syndrome, Traditional Chinese Medicine

INTRODUCTION

Gastric disorders such as epigastric pain, burning sensations, and postprandial discomfort are among the most common digestive complaints encountered in clinical practice. According to data from the World Gastroenterology Organization (2021), over 40% of the global population experiences dyspepsia or gastric disturbances each year. The main factors influencing the recurrence of gastric disorders include stress, dietary patterns, and medication use (Nuruniyah et al., 2024). Conventional medical management typically involves antacids, H2 blockers, or proton pump inhibitors (PPIs); however, long-term use can lead to side effects such as impaired nutrient absorption, diarrhea, and even an increased risk of gastrointestinal infections (Moayyedi et al., 2017).

In Traditional Chinese Medicine (TCM), stomach pain characterized by heat, burning sensations, excessive thirst, and a thick yellow tongue coating is identified as *Stomach Heat Syndrome* (Wei Re). This syndrome is usually caused by overeating, consumption of spicy and warming foods, or emotional stress disrupting stomach Qi function. TCM therapy focuses on eliminating heat, calming stomach Qi, and reducing inflammation (Chen et al., 2019).

One widely recognized herbal plant in both Indonesian traditional medicine and TCM is Temulawak (*Curcuma xanthorrhiza* Roxb). This plant contains active compounds such as curcuminoids, xanthorrhizol, and sesquiterpenes, known for their anti-inflammatory, antimicrobial, gastroprotective, and hepatoprotective effects. Numerous studies over the past decade have demonstrated that temulawak extract has the potential to reduce stomach pain through anti-inflammatory mechanisms and enhancement of the gastric mucosa (Ariyani et al., 2020; Riswanti et al., 2016).

Research by Sari et al. (2019) showed that administering temulawak extract to experimental animals with gastritis could reduce proinflammatory prostaglandin levels (such as TNF-α and IL-6) and accelerate gastric mucosa regeneration. Additionally, temulawak has been reported to reduce gastric acid production and increase protective mucus secretion (Handayani et al., 2018). In the context of TCM, temulawak is classified as a bitter and warm herb, functioning to promote Qi flow and eliminate stagnation and heat in the digestive tract.

Therefore, this research aims to evaluate the clinical efficacy and safety of temulawak (Shu Gu Jiang Huang) in reducing symptoms of Stomach Heat Syndrome among patients treated at LKP Daun Mas. Specifically, the study seeks to (1) determine the therapeutic effects of temulawak on the intensity and frequency of stomach pain, (2) assess its influence on related gastrointestinal indicators, and (3) analyze any adverse effects or tolerance issues arising from its use. Based on empirical observations and prior pharmacological findings, the study hypothesizes that temulawak administration will significantly reduce stomach pain symptoms and improve digestive function in patients with Stomach Heat Syndrome compared to baseline conditions.

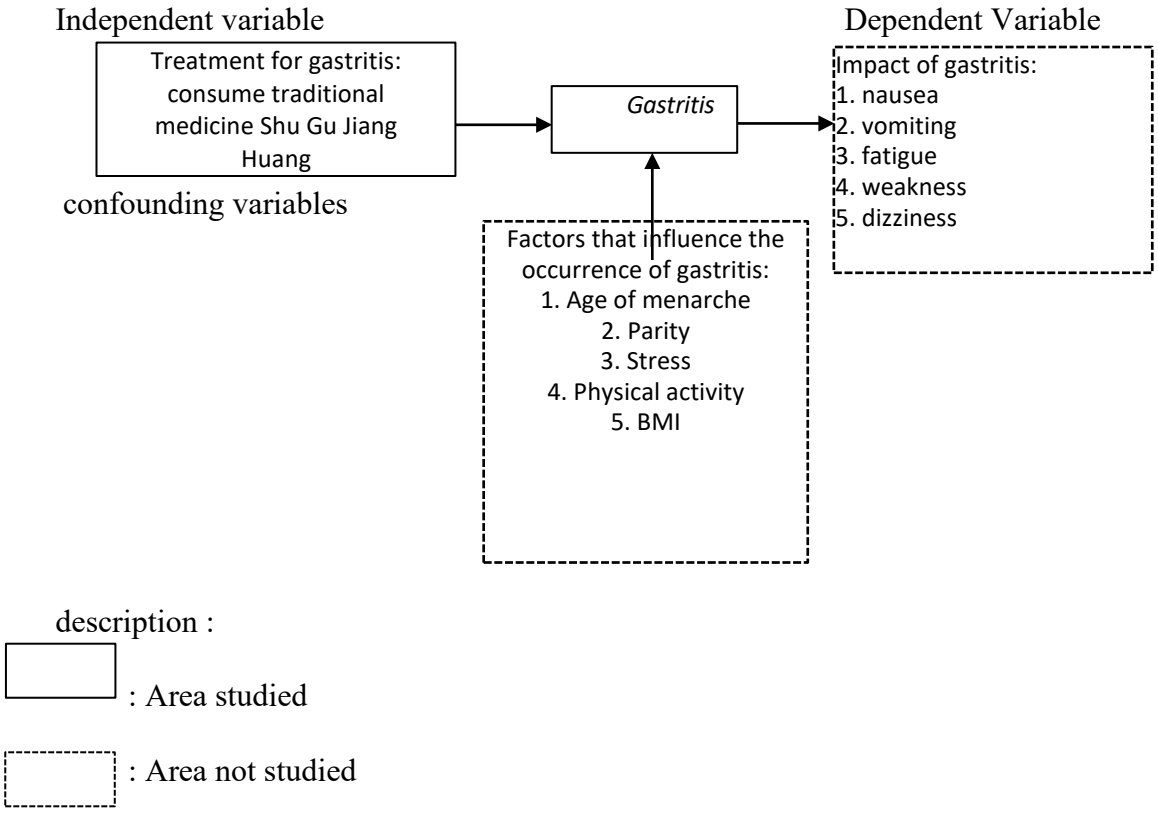
RESEARCH METHODS

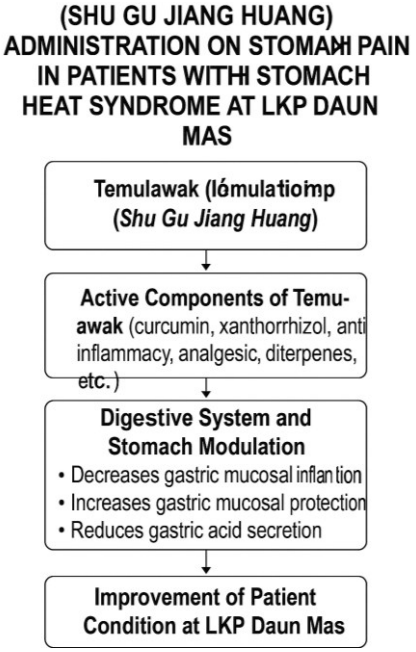
Research Problem

Based on the background, the research problem formulated in this study is: *"What is the effect of temulawak (Shu Gu Jiang Huang) administration on stomach pain in patients with Stomach Heat Syndrome at LKP Daun Mas?"*

Conceptual Framework

This study aims to determine the effect of temulawak (Shu Gu Jiang Huang) administration on stomach pain in patients with Stomach Heat Syndrome at LKP Daun Mas. The conceptual framework is as follows:





Hypothesis

In this study, the hypotheses can be formulated as follows:

1. **Null Hypothesis (Ho)**
   Shu Gu Jiang Huang herbal is not effective in reducing stomach pain associated with stomach heat syndrome at LKP Daun Mas.
2. **Alternative Hypothesis (Ha)**
   Shu Gu Jiang Huang herbal is effective in reducing stomach pain associated with stomach heat syndrome at LKP Daun Mas.

Population and Sample

The population used in this study consists of patients experiencing stomach pain with stomach heat syndrome at LKP Daun Mas from January to March 2025. The sample in this study consists of 30 patients experiencing stomach pain with stomach heat syndrome at LKP Daun Mas. The characteristics considered by the researcher are based on inclusion and exclusion criteria, categorized as follows:

Inclusion Criteria

Inclusion criteria are the characteristics that must be met by each member of the population to be selected as a sample (Notoatmodjo, 2018). In this study, the inclusion criteria are:

1. Adult women/men who purchase medicine at LKP Daun Mas.
2. Adult women/men aged 25–60 years.
3. Adult women/men experiencing stomach pain with stomach heat syndrome.
4. Adult women/men willing to participate as respondents.

Exclusion Criteria

Exclusion criteria are the characteristics of population members who cannot be selected as samples (Notoatmodjo, 2018). In this study, the exclusion criteria are:

1. Adult women/men experiencing stomach pain but have already taken pain-relief medication.
2. Adult women/men experiencing stomach pain at night.
3. Adult women/men who do not complete the consumption of Shu Gu Jiang Huang (drop out).

RESULTS AND DISCUSSION

In this study, a total of 30 respondents were involved in data collection, and all agreed to participate. The characteristics of the respondents were obtained from data including age, duration of pain, and BMI. Data presentation then focused on stomach pain measurements before and after administration of Shu Gu Jiang Huang herbal.

1. Respondent Characteristics

The majority of patients were aged 35–40 years, totaling 11 respondents (36.7%). Most respondents experienced pain lasting less than 4 days, totaling 29 respondents (96.7%). The majority of respondents had a normal body mass index (BMI), totaling 20 respondents (66.7%). Age is a factor that influences the risk and manifestation of stomach pain. Stomach pain or acid reflux can occur in anyone, but it is more common in adults. The risk increases after the age of 40 due to decreased saliva production, which normally helps neutralize stomach acid in the esophagus. BMI is also a factor that can cause stomach pain due to obesity, as increased abdominal pressure may cause relaxation of the lower esophageal sphincter (LES), allowing stomach acid to rise into the esophagus, causing heartburn and stomach pain. Other contributing factors include irregular eating patterns, lying down after meals, and certain medications.

2. Stomach Pain Before Shu Gu Jiang Huang Herbal Administration

Most patients experiencing stomach pain with stomach heat syndrome at LKP Daun Mas experienced moderate pain, totaling 19 respondents (63.3%). Pain is an unpleasant sensory and emotional experience resulting from actual or potential tissue damage, or described in terms of such damage (Wiarto, 2017). Several factors contributed to moderate pain in most respondents, including age, duration of pain, and BMI. In this study, the most common respondent age was 35–40 years (36.7%). Other factors influencing pain include previous pain experiences, age, anxiety, fatigue, and personal perception of pain (Judha et al., 2012).

Stomach pain may be caused by irregular eating schedules, hard or hot foods such as meatballs, caffeine-containing drinks like coffee and tea, spicy or acidic foods, and gas-producing foods such as potatoes, beans, and cabbage (Wartawarga, 2010). Poor dietary habits can make the stomach sensitive, leading to increased acid production. Excessive HCl (stomach acid) can cause friction in the stomach and small intestine, resulting in pain known as gastric ulcer. This friction is worse if the stomach is empty due to irregular eating, which can ultimately cause gastric bleeding (Rafani, 2009).

According to Traditional Chinese Medicine (TCM), stomach pain is caused by liver depression and spleen qi stagnation. Overactive liver qi due to anxiety, anger, or mental depression affects normal stomach function, leading to abdominal pain. Insufficient spleen qi affects blood formation. Prolonged liver qi stagnation generates heat, transforming into stomach yin deficiency. Pain in the stomach region is caused by accumulated heat in the stomach that cannot be released.

3. Stomach Pain After Shu Gu Jiang Huang Herbal Administration

Most patients experienced mild pain after the administration of Shu Gu Jiang Huang herbal, totaling 28 respondents (93.3%). The results showed a reduction in pain from severe and moderate levels to moderate and mild levels. This effect is due to the herbal content of curcumin (yellow compound), which promotes ulcer healing and reduces abdominal pain.

Curcumin contains phenolic compounds that play a role in immunity and inflammation. Its anti-inflammatory activity reduces inflammation in the stomach. Shu Gu Jiang Huang, which contains curcumin, can be used as hepatoprotective, anti-inflammatory, anticancer, antidiabetic,

antimicrobial, antihyperlipidemic, anti-cholera, antibacterial, and antioxidant therapy. According to TCM, treatment aims to relieve liver qi stagnation, regulate spleen and stomach qi, and stop pain. Herbal treatment regulates the central nervous system, gastrointestinal hormones, blood circulation in the abdominal area, cytokines, stomach function, acid control, inflammation response, and cell regeneration, strengthening the gastric mucosa. Being natural, herbal treatment has minimal or no side effects compared to chemical drugs.

4. Effectiveness of Shu Gu Jiang Huang Herbal for Stomach Pain

Consumption of Shu Gu Jiang Huang herbal over time provides beneficial effects, especially for patients with stomach pain and stomach heat syndrome. This study is supported by Paramita et al. (2019), who reported that giving turmeric extract or Shu Gu Jiang Huang has positive effects and can prevent gastric damage caused by NSAIDs, which often produce side effects like anorexia, nausea, vomiting, abdominal pain, and diarrhea.

According to TCM, Shu Gu Jiang Huang contains the following key herbs:

- Radix Bupleuri (Chai Hu): relieves liver qi stagnation
- Curcumae Longae Rhizoma (Jiang Huang): anti-inflammatory, improves circulation
- Cyperi Rhizoma (Xiang Fu): calms emotions, regulates qi cycle
- Paeoniae Alba (Bai Shao): analgesic, relaxes smooth muscles

The herbal mechanism reduces smooth muscle contractions in the digestive tract, relieving spasms and stomach pain, improves gastric motility for faster emptying, and has anti-inflammatory and antioxidant effects that help relieve gastric mucosal irritation.

CONCLUSION

Based on the results of this study, the conclusions are:

1. Before Shu Gu Jiang Huang herbal administration, all patients (26 respondents, 100%) experienced moderate stomach pain.
2. After Shu Gu Jiang Huang herbal administration, most patients (19 respondents, 73.1%) experienced mild stomach pain.
3. Shu Gu Jiang Huang herbal is effective in reducing stomach pain associated with stomach heat syndrome, as shown by the Wilcoxon test results with a p-value of $0.000 < 0.05$.

Recommendations

1. This study can increase knowledge about non-pharmacological treatments, such as Shu Gu Jiang Huang herbal, for reducing stomach pain.
2. Patients with stomach pain are encouraged to use Shu Gu Jiang Huang herbal to minimize the use of pharmacological drugs with side effects. Future researchers are encouraged to study other non-pharmacological interventions for stomach pain and compare their effectiveness with Shu Gu Jiang Huang herbal.

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