



THERAPIES FOR GASTRITIS PAIN

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ABSTRACT

Gastritis is one of the diseases of the digestive system that most people suffer from. In 2012, the World Health Organization (WHO) recorded that the incidence of gastritis in Indonesia reached 40.8%. Symptoms that commonly occur in people with gastritis are discomfort in the stomach, heartburn, bloating, headaches, nausea and vomiting which can interfere with daily activities. Gastritis can be treated pharmacologically and nonpharmacologically. There are several non-pharmacological therapies that can be used to reduce these symptoms. This article aims to discuss various therapies to treat gastritis pain. The method used is literature study. The results of the discussion concluded that there are several therapies that can be done at home independently for patients and families in dealing with gastritis pain are deep breath relaxation techniques, progressive muscle relaxation techniques, warm compresses, and herbal therapies such as turmeric, red ginger and honey.

Keywords: gastritis, pain, deep breath relaxation techniques, progressive muscle relaxation techniques, warm compresses, herbs

INTRODUCTION

Gastritis is one of the diseases of the digestive system that most people suffer from. In 2012, the *World Health Organization* (WHO) recorded that the incidence of gastritis in Indonesia reached 40.8% (Kusyati & Fauzi'ah, 2018). Based on the Indonesian Health profile in 2011, gastritis is one of the top 10 diseases in hospitalized patients in Indonesia with a total of 30,154 cases (4.9%) (Hidayah, 2017).

One of the clinical manifestations of gastritis patients is heartburn. Pain is an unpleasant sensory and emotional experience due to actual and potential tissue damage (Price & Wilson, 2012). In gastritis patients, pain that occurs is due to an inflammatory process that occurs in the mucosal and submucosal lining of the stomach wall. In general, signs and symptoms that often occur in patients who experience pain can be reflected in the patient's behavior, such as voice (crying, moaning, exhaling), facial expressions (grimacing, biting lips), body movements



(restlessness, tense muscles, pacing, etc.), social interactions (avoiding conversation, time disorientation) (Judha, 2012 in Supetran, 2018).

The management of gastritis pain is divided into two, namely pharmacological and non-pharmacological management. Pharmacological management, namely using drugs prescribed by doctors in the Health Service. Meanwhile, non-pharmacological management can be taught by nurses to patients and families independently. During the Covid-19 pandemic like now, gastritis sufferers who experience mild to moderate pain are not recommended to go to health services to reduce the risk of Covid-19 transmission. Therefore, it is important for patients and their families to know non-pharmacological treatment of gastritis pain that can be done at home.

From the many research articles that have been reviewed by the author, there are several non-pharmacological therapies that are proven to be able to treat gastritis pain, including deep breath relaxation techniques, progressive muscle relaxation techniques, warm compresses and herbal therapies such as the use of turmeric, red ginger and honey. This article will discuss more about these therapies.

DISCUSSION

A. Gastritis

1. Definition of Gastritis

According to Sudoyo, et al (2006), gastritis is an inflammatory process of the gastric mucosa and submucosa. Meanwhile, according to Price & Wilson (2012), gastritis is an inflammation of the gastric mucosa that can be acute, chronic, diffuse, or local, caused by bacteria or drugs. This inflammation can lead to swelling of the gastric mucosa to the release of the superficial mucosal epithelium which is the most important cause of disorders in the digestive system. The release of epithelial cells will stimulate an inflammatory process in the stomach (Sukarmin, 2012). The danger of gastritis, if allowed to continue, will damage stomach function and can



increase the risk of developing gastric cancer and causing death (Saydam, 2011).

According to Sukarmin (2012), gastritis is caused by an increase in excess stomach acid. Pain in gastritis arises due to mucosal erosion which can cause an increase in chemical mediators such as prostaglandins and histamine in the stomach which play a role in stimulating pain receptors. Pain due to gastritis disease if not treated as early as possible or allowed to get worse and eventually stomach acid will cause ulcers (ulcers), known as gastric ulcers, other than that complications can occur such as narrowing of the esophagus so that it is difficult to swallow, esophageal discharge, or exposure. stomach acid in the esophagus, to the 'leakage' of stomach acid into the small intestine.

2. Signs and Symptoms of Gastritis

Symptoms that commonly occur in sufferers of gastritis are discomfort in the stomach, flatulence, headaches and nausea which can interfere with daily activities, discomfort in the epigastrium, nausea, vomiting, burning or burning pain in the upper stomach that can getting better or worse when eating, loss of appetite, belching, and bloating. It can also be accompanied by fever, chills (chills), hiccups (hiccups).

Gastritis can be caused by stress, chemicals, drugs and alcohol, spicy, hot or acidic foods. In patients who experience stress, NV sympathetic nerve stimulation (Vagus Nerve) will occur, which will increase the production of hydrochloric acid (HCl) in the stomach which will cause nausea, vomiting and anorexia. Chemicals and stimulating foods will cause columnar epithelial cells, which function to produce mucus, to reduce their production. While the function of mucus is to protect the gastric mucosa from being digested by the gastric mucosal response because the decreased mucus secretion varies, including the vasodilation of gastric mucosal cells. The gastric mucosal layer contains enzymes that produce hydrochloric acid or HCl, especially the fundus area. Gastric mucosal vasodilation will cause HCl



production to increase. Anorexia can also cause pain, this pain is caused by contact with the gastric mucosa. The response of the gastric mucosa to decreased mucus secretion can be in the form of peeling. Exfoliation of the gastric mucosal cells will cause erosion to cause bleeding. The bleeding that occurs can be life threatening to the sufferer, but it can also stop on its own because of the regeneration process, so that erosion disappears within 24-48 hours after bleeding (Price & Wilson, 2012).

3. Causes of Gastritis

The causes of gastritis according to Herlan (2001) are excessive alcohol intake (20%), smoking (5%), spicy foods (15%), drugs (18%) and radiation therapy (2%), while according to Hasna & Hurih (2009) Gastritis can also be caused due to bacterial infections, stress, autoimmune diseases, radiation and Chron's Disease.

Furthermore, according to Muttaqin & Kumala (2013), the causes of gastritis include: (1) Medicines, such as nonsteroidal anti-inflammatory drugs / NSAIDs (indomethacin, ibuprofen, and salicylic acid), sulfonamides, steroids, cocaine, chemotherapy agents (mitomycin, 5-fluora-2-deoxyuriine), salicylates, and digitalis are irritants to the gastric mucosa. (2) Alcoholic drinks, such as: whiskey, vodka and gin. (3) Bacterial infection; such as *H. pylori* (most commonly), *H. heilmanii*, streptococci, staphylococci, proteus species, clostridium species, *E. coli*, tuberculosis, and secondary syphilis. (4) viral infection by cytomegalovirus, (5) fungal infection; candidiasis, histoplasmosis, and phycomycosis. (6) Physical stress caused by burns, sepsis, trauma, surgery, respiratory failure, kidney failure, damage to the central nervous system, and gastrointestinal reflux. (7) Food and drinks that are irritants; Spicy foods and drinks containing caffeine and alcohol are irritating agents of the gastric mucosa. (8) Bile salts, occur in conditions of reflux of bile salts (an important alkaline component for the activation of gastrointestinal enzymes) from the small intestine to the gastric mucosa, thereby causing a mucosal inflammatory response. (9) Ischemia, this is



related to the result of decreased blood flow to the stomach. (10) Direct trauma to the stomach, associated with a balance between aggression and defense mechanisms to maintain mucosal integrity, can induce an inflammatory response to the gastric mucosa.

One of the causes of gastritis is infection from the *Helicobacter pylori* bacteria and is the only bacteria that lives in the stomach. These bacteria can infect the stomach as a child and cause chronic gastric disease. In fact, it is estimated that more than 50% of the world's population has been infected with this bacteria since childhood. If left unchecked, it will cause problems throughout life (Soemoharjo, 2007). According to the Indonesian Gastroenterology Association (PGI) and the Indonesian *Helicobacter Pylori* Study Group (KSHPI) in 2001, it is estimated that 20% of Indonesia's population has been infected by *H. Pylori* (Daldiyono, 2004). The discovery of *Helicobacter pylori* infection may have an impact on the high incidence of gastritis, in several regions in Indonesia it shows a high incidence of gastritis.

4. Gastritis Treatment

The main goals in the treatment of gastritis are relieving pain, eliminating inflammation and preventing the development of peptic ulcers and complications. Based on its pathophysiology, gastritis pharmacological therapy is aimed at suppressing aggressive factors (stomach acid) and strengthening defensive factors (mucosal resistance). Until now, treatment is aimed at reducing stomach acid, namely by neutralizing stomach acid and reducing gastric acid secretion. In addition, gastritis treatment is also carried out by strengthening the defensive mechanism of the gastric mucosa with cytoprotection drugs (Dipiro, 2008 in Rondonuwu, Wullur & Lolo, 2014).

Treatment for gastritis includes: (1) Anticoagulants: if there is bleeding in the stomach, (2) Antacids: in severe gastritis, fluids and electrolytes are given intravenously to maintain fluid balance until symptoms subside, for gastritis that is not severe it is treated with antacids and break. (c) Histonine: ranitidine can be given to inhibit the formation of stomach acid and then



reduce stomach irritation. (d) Sulcralfate: given to protect the gastric mucosa by covering it, to prevent re-diffusion of acid and pepsin which cause irritation. (e) Surgery: to remove gangrene and perforation, Gastrojejunuskopi / gastric resection: to overcome pyloric obstruction.

B. Gastritis Pain Management at Home

1. Deep Breath Relaxation Techniques

Deep breathing relaxation technique is a form of nursing care, in which the nurse teaches the client how to do deep breaths, slow breathing (holding maximum inspiration) and how to exhale slowly. Besides being able to reduce pain intensity, deep breath relaxation techniques can also improve lung ventilation and increase blood oxygenation (Smeltzer and Bare, 2002). This is supported by a qualitative study conducted by Hawati (2020) that the informant admitted that the stomach pain that was felt gradually decreased after performing deep breathing relaxation techniques.

There are several deep breath relaxation positions that can be done: (a) Supine relaxation position; lying on your back, legs straight and slightly open, hands relaxed beside the knees and head given a pillow. (b) Relaxation position lying on your side; lie on your side, knees bent, give a pillow under your head and give it a pillow under your stomach, so that your stomach doesn't hang. (c) The relaxation position in a supine position; Bend your knees, lie on your back, knees bent, arms by your ears. (d) relaxation position by sitting; Sitting hunched over, arms on the back of the chair or on the bed, legs should not hang.

The deep breath relaxation technique procedure according to Priharjo (2003), namely the form of breathing used in this procedure is diaphragmatic breathing which refers to the flattening of the diaphragm dome during inspiration which results in enlargement of the upper abdomen in line with the pressure of incoming air during inspiration. The steps for deep breathing relaxation techniques are as follows: (1) Create a calm environment, (2) Try to stay relaxed and calm, (3) Take a deep breath from the nose and fill the



lungs with air through a count of 1,2, 3, (4) Slowly the air is exhaled through the mouth while feeling the upper and lower extremities relax, (5) Encourage breathing with a normal rhythm 3 times, (6) Inhale again through the nose and exhale through the mouth, (7) Encourage repeat procedure until the pain is relieved, (8) Repeat up to 15 times, alternating with short breaks every 5 times.

2. Progressive Muscle Relaxation Techniques

According to Setyoadi & Kushariyadi (2011) preparations for this technique are: **Preparation;** preparation of tools and environment: chairs, pillows, and a quiet and quiet environment. (1) Understand the purpose, benefits, procedures. (2) Position your body comfortably, namely lying down with your eyes closed using a pillow under your head and knees or sitting on a chair with your head supported, avoiding a standing position. (3) Take off used accessories such as glasses, watches and shoes. (4) Loosen ties, belts or other binding properties. Procedure; **Movement 1:** Shown to train the hand muscles. (a) Grasp your left hand while making a fist. (b) Make the fist stronger while feeling the sensation of tension that occurs. (c) When releasing the fist, feel the relaxation for 10 seconds. (d) This movement of the left hand is performed twice so as to distinguish the difference between muscle tension and the relaxed state experienced. (e) Do the same with the right hand. **Movement 2:** Shown to train the back hand muscles. (a) Bend your arms back in the stretch so that the muscles in the back of the hand and the forearm are tight. (b) The radius faces the ceiling. **Movement 3:** Shown to train the biceps muscles (the large muscles at the top of the base of the arms). (a) Hold your hands together so that they become fists. (b) Then bring the two calluses to the shoulders so that the biceps will become tense. **Movement 4:** Shown to train the shoulder muscles to relax. (a) Raise the shoulders as high as if they were touching the ears. (b) Focus the attention of the hoist on the contracting tension that occurs in the shoulders, upper back and neck. **Movements 5 and 6:** shown to relax the facial muscles (such



as forehead, eyes, jaw and mouth). (a) Movement of the forehead muscles by wrinkling the forehead and eyebrows until the muscles feel wrinkled. (b) Firmly close the eye so that you can feel the tension around the eye and the muscles that control eye movement. **Movement 7:** Intended to relax the tension experienced by the jaw muscles. Closing the jaw, followed by biting the teeth so that there is tension around the jaw muscles. **Movement 8:** Aimed at relaxing the muscles around the mouth. The lips are bent as hard as possible so that you will feel the tension around the mouth. **Movement 9:** Aimed at relaxing the front and back neck muscles. (a) The movement begins with the back of the neck muscles and then the front of the neck muscles. (b) Put your head down so you can rest. (c) Press the head against the cushioned surface of the chair so that you can feel the tension in the back of the neck and upper back. **Movement 10:** Aimed at training the front neck muscles. (a) Movement of bringing the head forward. (b) Immerse the chin into the chest, so that you can feel the tension in the neck area on the face. **Movement 11:** Aimed at training the back muscles (a) Lift the body from the back of the chair. (b) Arched back (c) Expose the chest, hold the tense condition for 10 seconds, then relax. (d) When relaxed, put your body back in the chair, letting the muscles straighten. **Movement 12:** Aimed at relaxing the chest muscles. (a) Take a deep breath to fill the lungs with as much air as possible. (b) Held for a while, feeling the tension in the chest until it goes down to the stomach, then released. (c) When the tension is released, breathe normally with relief. Repeat one more time so that you can feel the difference between a tense and a relaxed state. **Movement 13:** Aimed at training the abdominal muscles (a) Firmly pull the stomach in. (b) Hold until it becomes tight and hard for 10 seconds, then released freely. (c) Repeat the same as the initial movement for the stomach. **Movement 14-15:** Aimed at training the leg muscles (such as thighs and calves). (a) Straighten the soles of the feet so that the thigh muscles are tense (b) Continue to lock the knees in such a way that the tension transfers to the calf muscles. (c)



Hold the tense position for 10 seconds, then release. (d) Repeat each movement twice each.

3. Warm Compress

The use of warm compresses is expected to increase relaxation of muscles and reduce pain due to spasm or stiffness and provide a local feeling of warmth. In general, heat is quite useful for treatment. Heat relieves ischemia by decreasing contractions and increasing circulation. Warm compresses can cause the release of body endorphins thus blocking the transmission of pain stimulation (Subekti & Utami, 2011).

The purpose of giving warm water compresses according to Asmadi (2012), namely warm water compresses can improve blood circulation, reduce pain, provide warmth, comfort and calm to clients, accelerate exudate discharge and stimulate intestinal peristalsis. In this study, a dry warm water compress was used, where usually a jar bag was used.

Warm compress procedures that can be done are: (1) Washing hands, (2) Positioning the patient as comfortable as possible, (3) Filling warm jars or bottles with warm water (40-50 °C) as much as $\frac{1}{2}$ - $\frac{3}{4}$ then close tightly, (4) Drying the warm jar or bottle with a cloth, (5) Putting the liner on the part of the body to be compressed and then putting a warm jar or bottle there, (6) Doing a compress until the pain is reduced (10) -15 minutes).

4. Herbal therapy

a. Turmeric

The turmeric plant in Latin is called *Curcum domestica* or *curcuma longa*, while in English it is called turmeric. It has long been used as a traditional medicinal herb, for example for inflammation, diarrhea, stomachache, jaundice, gastritis, stomach ulcers. From the research results, turmeric extract shows anti-inflammatory, antibacterial, antioxidant, anti-ulcer, and gastroprotective effects (Atmaja, 2008). According to Budianto (2014), giving turmeric ethanol extract given intra-orally to rats reduced



levels of free acid, total acid, organic acid and gastric acid pH which was induced by histamine which prevented gastric ulcers caused by histamine. How to use turmeric, namely (1) Use turmeric that is dried and then ground into a powder, (2) The turmeric powder is then brewed in warm water, (3) The recommended turmeric for treating ulcers is 500 milligrams of curcumin, equivalent to 1/2 teaspoon of turmeric powder. per day.

b. Red ginger

Red ginger (*Zingiber Officinale* var. *Rubrum*) is 42-43 mm in diameter, 52-104 mm high and 123-126 mm long. Red ginger has small reddish yellow rhizomes and is smaller than small ginger and coarse fiber. The taste is also very spicy and has a very sharp aroma (Setyawan, 2015).

One of the substances contained in red ginger is gingerol. Gingerol has anti-inflammatory, antipyretic, gastroprotective, cardiotoxic, hepatotoxic, antioxidant, anti-cancer, antiangiogenesis and anti-atherosclerotic effects. Apart from gingerol, there are also zingerones. Gingerol and zingerone can protect the gastric mucosa by inhibiting $H + K + -ATPase$ so that it can inhibit gastric acid secretion. The flavonoids contained in ginger can increase prostaglandins which are the defensive factors of the stomach. Acetone and methanol can protect the stomach by reducing stomach acid and preventing irritation of the gastric mucosa (Dharmesh, Nanjundaiah & Annaiah, 2011).

The recommended way to use it is that ginger is peeled, then grated or sliced or it can be diced and then cooked. Ginger can also be eaten raw, soaked in hot water to make ginger tea, or added to soups, stir-fries or other foods. The recommended consumption of ginger is 4 grams or about less than one-eighth of a cup a day.

c. Honey

The National Honey Board states that honey contains about 0.57% acid, 0.266% protein, 0.043% nitrogen, 0.1% amino acids, 0.17% minerals, and several other components, such as phenols, colloids, and vitamins,



which all make up about 2.1% of the total composition of honey and honey can also speed up wound healing time (Mustaba, Winaya, Berata, 2012). Honey has gastroprotector properties because it has characteristics including: hyperosmolar, honey has a high sugar concentration and low water content causes the osmotic pressure to increase so that the environment around the microbes becomes hypertonic which causes the water inside the microbial cells to come out causing plasmolysis. Hygroscopic, honey is also hygroscopic, allowing microbial dehydration to occur which results in inactive microbes. Low pH levels, an environmental condition that does not support microbial growth (Suprijono, Trisnadi, Negara, 2011).

According to a clinical review published in the British Medical Journal, researchers advise people with acid reflux to drink thick honey. From the report, the symptoms of heartburn are due to increased stomach acid, which is more relieved after drinking a teaspoon of honey. If you are not comfortable drinking a teaspoon of honey, you can mix it with a glass of warm water.

CONCLUSION

Gastritis is a disease in which there is inflammation of the mucosa and submucosa of the stomach. One of the clinical manifestations of gastritis is heartburn. There are several therapies that can be done independently at home for patients and families in dealing with gastritis pain, namely deep breath relaxation techniques, progressive muscle relaxation techniques, warm compresses, and herbal therapies such as turmeric, red ginger and honey.

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