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Effects Of Naturopathic Intervention On Gastritis: A Single Case Study

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Abstract:**Background:** Gastritis, like a mouth or skin ulcer, is an open sore in the stomach or intestinal lining.Gastritis are typically brought on by acid and the stomach enzyme pepsin. An imbalance between defensive and aggressive elements leads to an ulcer. The Helicobacter pylori bacteria are the main culprit behind peptic ulcers.**Materials and Methods:** The Sree Ramakrishna Medical College of Naturopathy and Yogic Sciences and Hospital is located in Kulasekharam, Tamil Nadu, India. There was only one case study.Following an explanation of the study's purpose, verbal consent was acquired. The investigation was conducted over a 21-day period.This study's parameters include a pain scale and the regular recording of symptom changes.**Results:**For the data analysis, JASP software version 0.19.3 was utilized.It is evident that the combined yoga and naturopathy therapies resulted in a considerable reduction in gastritis symptoms.(t0.0977, sig 2tailed.0.9).**Conclusion:** Given the advantages of the biotherapies covered by naturopathy and yoga, it would be wise to incorporate them as a supplement to traditional treatment plans in order to lessen the negative effects of medication use and to effectively manage the symptoms of gastritis. In order to prevent and treat gastritis, yoga and naturopathy aim to lessen its underlying cause through a lifestyle that incorporates nutrition and stress-reduction techniques.

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Keywords: Gastritis, Pain, Peptic ulcer,H.pylori, Stomach inflammation, Gastric erosion.

INTRODUCTION

Gastritis is an open sore in the stomach or intestinal lining. There are two primary types of gastritis: acute gastritis, which appears suddenly, and chronic gastritis, which appears gradually [1].The digestive enzymes pepsin and acid are the usual causes of gastritis. An ulcer may develop if defensive and aggressive components are not balanced. Helicobacter pylori bacteria, which are linked to gastritis, can irritate mucous membranes, create excessive inflammation, and increase gastric secretion, all of which can cause the stomach mucosa to rupture and become inflamed. Gastritis is caused by a number of risk factors, such as smoking, drinking alcohol, using tobacco products, eating spicy meals, using certain medications, being stressed, inadvertently ingesting foreign objects, and getting infections [2].Antibiotics are administered to eradicate H. pylori if it was the cause of the ulcer. Medication that lowers stomach acid and protects the duodenum and stomach lining will aid in the healing of ulcers. Washing your hands both before and after using the restroom, correctly preparing meals, and drinking water from a clean, safe source are always to help prevent ulcers brought on by H. pylori infections. The new development of anti-ulcer drugs will be the subject of this prospective investigation. The study's primary goal was to assess how yoga and naturopathic therapies affected the quality of life and alleviation of symptoms such as abdominal discomfort in patients with gastritis.

PATHOPHYSIOLOGY

A flagellated gram-negative bacterium, H pylori, is spread by the environment or via the oral-oral or fecal-oral pathways. Bacterial virulence factors and the host's immune responses interact intricately in the pathophysiology of H pylori-induced gastritis. Chronic inflammation results from this interaction, which also damages the stomach mucosal barrier. The virulence factors that H pylori contains help cells adhere to one another, harm cells, break tight junctions, and elude the host immune system [3].

A defect in the duodenal or stomach mucosa that extends into the muscles is called gastritis. Mucosa is secreted by the stomach and deodenum's epithelial cells in reaction to cholinergic stimulation and irritation of the epithelial lining. Pepsin and acid cannot pass through the gel layer covering the stomach and duodenal mucosa. Bicarbonate, secreted by other gastric and duodenal cells, helps buffer acid that is close to the mucosa. Because they boost the formation of the mucus layer and bicarbonate, prostaglandins have a crucial protective role. Other mechanisms are in place to lessen damage in the case that acid pepsin enters the epithelial cells. The basolateral cell membrane of the epithelial cell contains ion pumps that help regulate intracellular pH by removing excess hydrogen ions. Healthy cells move to the injured location throughout the healing process. Acid that permeates the damaged mucosa is eliminated by mucosal blood flow, which also supplies surface epithelial cells with bicarbonate. The physiological balance between the discharge of stomach acid and the protection of the gastroduodenal mucosa is normally exceeded. When the defense mechanism and aggressive elements are interfered with, mucosal damage and peptic ulcers develop. By permitting reverse passage of hydrogen ions and resulting in damage to epithelial cells, aggressive factors like alcohol, bile salt, pepsin, H. Pylori infection, and some medications can change the mucosal defense. Tight intercellular junctions, mucus, mucosal blood flow, cellular restitution, and epithelium renewal are all components of the defensive system. Studies on H pylori have revealed that it is a key component of the triad that causes primary peptic ulcer disease, which also includes pepsin and acid.This organism's distinct microbiologic traits, like the production of urease, enable it to alkalinize its microenvironment and endure for years in the stomach's hostile, acidic environment, where it causes mucosal inflammation and, in some situations, makes peptic ulcer disease worse. Inflammation usually results from H. pylori colonizing the stomach mucosa. Infected patients have been found to have lower levels of somatostatin, higher levels of gastric and pepsinogen, and increased acid exposure in the duodenum. The virulence components that H pylori produces, such as lipopolysaccharide, vacuolating cytotoxin, urease, and catalase, are extensively documented. Since eliminating H pylori restores the deficiency, it has also been shown that the majority of individuals with duodenal ulcers have impaired duodenal bicarbonate secretion.Reduced duodenal bicarbonate secretion and increased stomach acid secretion work together to lower the pH of the duodenum, which promotes the development of gastric metaplasia. There may be no symptoms associated with small ulcers. Serious bleeding can result from certain ulcers. Although it is a common symptom, abdominal pain does not always occur. Each person may experience pain differently. Additional symptoms include mild nausea, upper abdominal pain or discomfort, and upper abdominal pain that wakes you up at night. These symptoms are commonly experienced one to three hours after a meal and include feelings of fullness, hunger, and an empty stomach. Bloody or black tarry stools, chest pain, exhaustion, perhaps bloody vomiting, and weight loss are further possible symptoms.

METHODOLOGY:

The study was conducted at the Sree Ramakrishna Medical College of Naturopathy and Yogic Sciences and Hospital in Kulasekharam, Tamil Nadu, India.. The study's participants were female patient aged 39. Verbal consent was acquired when the study's purpose was explained. The research was conducted over 21 days. One of the study's parameters is the pain scale, and frequent symptom changes are recorded. Patients undergo hydrotherapy, mud therapy, psychotherapy, healthy eating, and lifestyle management. The volunteer was cooperative and well-educated.

Criteria:

Verbal consent was provided.age 39. A female patient who has gastritis. She should be able to read, write, and comprehend in both Tamil and English.

Study design:

Single case study ---> Pre assessment ---> Yoga and Naturopathy Intervention ---> Post assessment---> Statistical analysis by JASP software and interpretation of results [4].

Methods:A single case study. Pre-assessments were carried out prior to the intervention, and post-assessments after the 21-day intervention were carried out using the variables.

Treatment protocol:

The patient received naturopathic and yoga therapy. Included are mud therapy, yoga, hydrotherapy, and food therapy. The following combined yoga and naturopathy regimen was followed for 21 days. The patient was advised to follow a naturopathic diet.

Diet Given to Patient:

DAYS	7.30AM	8.00AM	11.00AM	1.00PM	4.00PM	7.00AM
1	Ash guard Juice	Veg Upma	Clear pomegranate juice	Rice,Vegetables ,butter milk	Cucumber and carrot salad	Gluten free Chappathi,Boiled Vegetables
2	Cabbage juice	Veg Poha	Coconut milk	Rice,Vegetables ,butter milk	Vegetable salad	Gluten free Chappathi,Boiled Vegetables
3	Ladys finger	Idly with vegetables	Carrot juice	Rice,Vegetables ,butter milk	Cucumber Salad	Gluten free Chappathi,Boiled Vegetables
4	Ash guard Juice	Veg Upma	Clear pomegranate juice	Rice,Vegetables ,butter milk	Cucumber and carrot salad	Gluten free Chappathi,Boiled Vegetables
5	Cabbage	Veg Poha	Coconut	Rice,Vegetables	Vegetable	Gluten

	juice		milk	,butter milk	salad	free Chappathi,Boiled Vegetables
6	Ladysfinger	Idly with vegetables	Carrot juice	Rice,Vegetables ,butter milk	Cucumber Salad	Gluten free Chappathi,Boiled Vegetables
7	Ash guard Juice	Veg Upma	Clear pomegranate juice	Rice,Vegetables ,butter milk	Cucumber and carrot salad	Gluten free Chappathi,Boiled Vegetables
8	Cabbage juice	Veg Poha	Coconut milk	Rice,Vegetables ,butter milk	Vegetable salad	Gluten free Chappathi,Boiled Vegetables
9	Ladysfinger	Idly with vegetables	Carrot juice	Rice,Vegetables ,butter milk	Cucumber Salad	Gluten free Chappathi,Boiled Vegetables
10	Ash guard Juice	Veg Upma	Clear pomegranate juice	Rice,Vegetables ,butter milk	Cucumber and carrot salad	Gluten free Chappathi,Boiled Vegetables
11	Cabbage juice	Veg Poha	Coconut milk	Rice,Vegetables ,butter milk	Vegetable salad	Gluten free Chappathi,Boiled Vegetables
12	Ladysfinger	Idly with vegetables	Carrot juice	Rice,Vegetables ,butter milk	Cucumber Salad	Gluten free Chappathi,Boiled Vegetables
13	Ash guard Juice	Veg Upma	Clear pomegranate juice	Rice,Vegetables ,butter milk	Cucumber and carrot salad	Gluten free Chappathi,Boiled Vegetables
14	Cabbage juice	Veg Poha	Coconut milk	Rice,Vegetables ,butter milk	Vegetable salad	Gluten free Chappathi,Boiled

						Vegetables
15	Ladysfinger	Idly with vegetables	Carrot juice	Rice,Vegetables ,butter milk	Cucumber Salad	Gluten free Chappathi,Boiled Vegetables
16	Ash guard Juice	Veg Upma	Clear pomegranate juice	Rice,Vegetables ,butter milk	Cucumber and carrot salad	Gluten free Chappathi,Boiled Vegetables
17	Cabbage juice	Veg Poha	Coconut milk	Rice,Vegetables ,butter milk	Vegetable salad	Gluten free Chappathi,Boiled Vegetables
18	Ladysfinger	Idly with vegetables	Carrot juice	Rice,Vegetables ,butter milk	Cucumber Salad	Gluten free Chappathi,Boiled Vegetables
19	Ash guard Juice	Veg Upma	Clear pomegranate juice	Rice,Vegetables ,butter milk	Cucumber and carrot salad	Gluten free Chappathi,Boiled Vegetables
20	Cabbage juice	Veg Poha	Coconut milk	Rice,Vegetables ,butter milk	Vegetable salad	Gluten free Chappathi,Boiled Vegetables
21	Ladysfinger	Idly with vegetables	Carrot juice	Rice,Vegetables ,butter milk	Cucumber Salad	Gluten free Chappathi,Boiled Vegetables

Treatment Protocol

DAYS	5.30AM	6.45AM	3.00PM
1	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
2	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
3	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
4	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
5	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
6	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
7	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
8	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
9	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
10	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
11	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
12	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
13	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
14	Yoga	Eye mud pack	Abdomen mud pack

		&Abdomen mud pack	
15	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
16	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
17	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
18	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
19	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
20	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack
21	Yoga	Eye mud pack &Abdomen mud pack	Abdomen mud pack

Yoga Protocol:

S.NO	Yoga Pose	Rounds
1	Trikonasana, Katichakrasana, Padahastasana, Ardha kati chakrasana, Tadasana.	3 rounds each, 20 minutes
2	Shavasana, Pavanmuktasana, Halasana,Balasana.	3 rounds each, 20 minutes
3	Bhujangasana,Shashankasana,Makarasana,Shalabhasana	3 rounds each, 20 minutes
4	Vajrasana, Paschimottanasana, Padmasana.	3 rounds each, 20 minutes
5	Sheetali, Sheetkari, Chandra anuloma viloma	3 rounds each, 10 minutes

Total Duration: 1 hour 30 munites

RESULTS

This study set out to evaluate the effectiveness of naturopathy and yoga as remedies for gastritis. Data was gathered both at the benchmark and following the intervention. The findings indicated that there was a considerable amount of pain. Both general health and the condition of gastritis have improved. Abdominal discomfort is one of the characteristics that has clearly greatly decreased.For the data analysis, JASP software version 0.19.3 was utilized.It is clear that the combined naturopathic and yoga treatments significantly decreased the symptoms of gastritis.(t0.0977, sig 2tailed 0.9).

Pain score

Days	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Pain scale	6	6	6	5	5	5	4	4	4	4	4	4	4	4	4	3	3	2	2	2	2

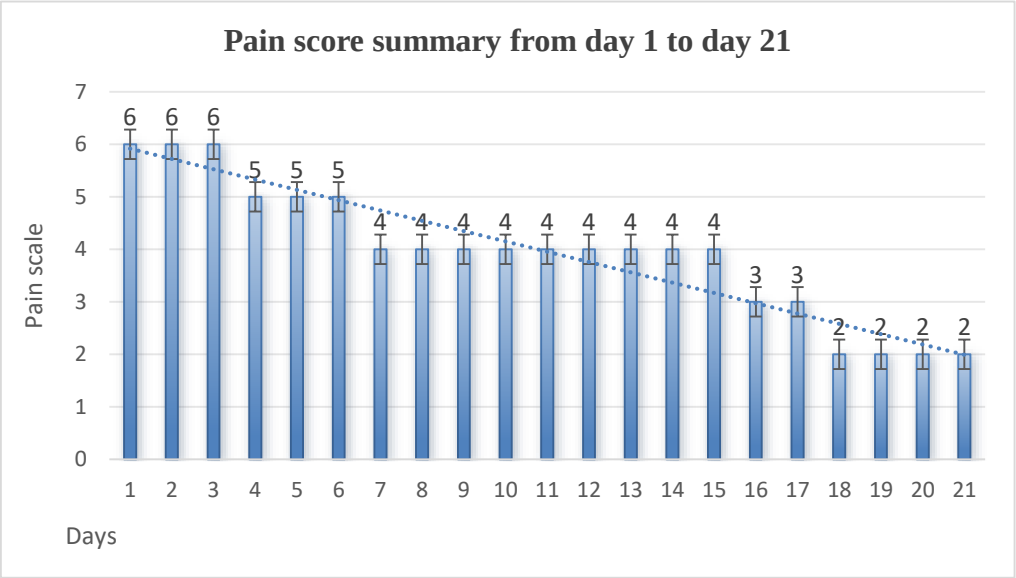

Figure:1

Table:1 Statistics for Samples:

Pre VAS - Post VAS	Mean	Variance	Std.Deviation	Coefficient of variation	Std.error mean
	3.952	1.648	1.284	0.325	0.280

Table:2 Paired sample statistics:

Pre VAS - Post VAS	Mean	Variance	Std. Deviation	Std.error mean	95% confidence		t	P Value (2-tailed)
					upper	lower		
	3.952	1.648	1.284	0.280	4.537	3.368	0.0977	0.9231

DISCUSSION

The study's primary goal was to assess how yoga and naturopathic therapies affected the quality of life and alleviation of symptoms such as abdominal discomfort in patients with gastritis. Self-reported visual analogue scale (VAS) was employed. There is only one case study here. Gastric protection primarily aims to lessen or prevent chemically produced acute hemorrhagic erosions, which are exerted by substances like prostaglandins without limiting acid secretion. Gastritis arises when the gastric mucosa is continuously exposed to various harmful stimuli. According to our current study, the highest prevalence of gastritis occurs in people over 35. The current study demonstrates a notable difference in pain reduction, improved digestive functions, physical and emotional well-being, social functioning, weariness, and vitality. Yoga and naturopathy are two of the various treatments that can help people with gastritis. They are regarded as drugless treatment methods. These consist of yoga, nutrition treatment, hydrotherapy, and so forth. Any pathological condition, whether acute or chronic, is best treated with these methods. Naturopathy and yoga aim to treat the patient holistically rather than merely by removing the underlying cause. A naturopathic diet is essential for easing gastritis symptoms. H.pylori can be inhibited by probiotic bacteria through immunological or non-immune processes. Buttermilk is one of several probiotics that have been demonstrated to have positive and preventative effects on H. pylori infections. Using hydrotherapy in the form of compresses and packs, like a cold abdominal pack, can

significantly reduce the size of peptic ulcers and gastritis while also increasing tolerance to stressful situations. Rehabilitating patients with stomach pain and gastric dysfunction is clearly effective. Increased sympathetic nerve activity reduces the production of gastric parietal cells. When under stress, the immune system is less able to fight off infections because white blood cells in the stomach lining are less active in destroying H pylori, which makes it easier for the bacteria to permeate the lining and deeper layers of the stomach. Vestibular stimulation reduces stress by both directly and indirectly inhibiting the hypothalamus, pituitary, adrenal glands, and overall stress pathways. Therefore, we can speculate that yoga may help alleviate the majority of gastritis symptoms.We might infer that it might be the result of underlying digestive and absorption issues in an individual or, in a few cases, a recurrence of migraine headaches after hospitalization. However, compared to the first day, the degree of discomfort was less intense on the twenty-first day. This might have likely resulted from a number of things influencing the person, including abrupt environmental changes, fasting, nutritional changes, or withdrawal symptoms from drinking tea and coffee. On the twenty-first day, however, the level of discomfort was less severe than it was on the first day.As demonstrated by the findings, the interventions provided proved to be successful when used as a substitute treatment for gastritis.

CONCLUSION

Strong evidence from prospective studies supports the beneficial effects of alternative medical systems on gastritis, including increased use of stress-reduction techniques, hydrotherapy and mud therapy treatments, yoga, and a healthy bland and alkaline diet among those who suffer from the condition. In light of the positive outcomes of the biotherapies covered by naturopathy and yoga, it would be prudent to incorporate them as a supplement to traditional treatment plans in order to lessen the negative effects of medication use and to effectively manage the symptoms of gastritis.

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