



**“EFFICACY OF YOGA AND NATUROPATHY IN THE MANAGEMENT OF  
GASTRITIS”**

**Sudhamshi Beeram\* (BNYS) and Ananya Lakshmi (MBBS, MD)**

India.

\*Corresponding Author: Sudhamshi Beeram (BNYS)

India.

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**ABSTRACT**

**Background:** Gastritis is an inflammation of the stomach lining, which is fairly common and often results due to dietary and lifestyle factors. The knowledge and evidence on the combined effect of Naturopathy and Yoga on gastritis is limited. Hence, this study was conducted to evaluate the effects of naturopathy of yoga in reduction of gastritis symptoms. **Materials and methods:** 113 patients of both male and female genders natured in the vicinity of 30-60 years were entitled for the study. They were recruited from SDM Yoga and Nature cure hospital, Shantivana. Assessments were done using the visual analogue scale and Likert symptomatic severity scale and collected on the day of admission and discharge from the hospital. **Results:** After the integrated approach of yoga and naturopathy intervention, there was a significant decrease in the symptoms of gastritis like vomiting, bloating, belching pain abdomen and heart burn. **Conclusion:** Yoga and naturopathy, being a lifestyle incorporating diet, stress management training target at cutting down the root cause of Gastritis in order to prevent it as well as improve the current condition.

**KEYWORDS:** Gastritis, Alternative medicine, Gastric burn, Yoga and Naturopathy, Gastric disorders, AYUSH.

**INTRODUCTION**

Gastritis is one of the most common conditions seen in people who are under constant stress, especially adolescents but can affect any individual at any period of their lifetime.<sup>[1]</sup> A variety of mild to severe abdominal symptoms may indicate gastritis. Gastric disorders are common; unless treated promptly and completely, they can continue to cause problem throughout the person's life. Patients need assistance to learn modified eating habits in order to learn modified eating habits in order to achieve and maintain health and to make necessary lifestyle changes.<sup>[2]</sup> The condition of Gastritis represents a state of inflammation, irritation or erosion of the stomach lining which may occur suddenly (acute) or gradually (chronic).

Now a days, one of the most important causes of gastritis is the infection by *Helicobacter pylori* (*H.pylori*)<sup>[3]</sup> and the risk factors like smoking, alcohol consumption, tobacco use, spicy food, drugs, stress, swallowed foreign bodies and infections which leads to excessive inflammation,<sup>[4]</sup> irritation of mucous membrane and excessive gastric secretion that rupture and inflame the stomach mucosal lining and affected person will get abdominal pain, indigestion, nausea, vomiting, diarrhoea, bad taste in the mouth, loss of appetite burning pain in epigastria region and other tract dysfunctions.<sup>[5]</sup> The

mucosal lining of the stomach normally protects it from the action gastric acid (hydrochloric acid) and the gastric acid may protect the stomach from bacterial infection. Generally, there is no universally accepted classification of gastritis<sup>[6]</sup> and early classification was based mainly on the morphology, but recently pathogenic mechanisms have also been incorporated.

‘Not choice, but habit rules the unreflecting herd’. Habits can affect one's life either in a positive or a negative way. In the ever changing 21<sup>st</sup> century, people bring the word a negative connotation.<sup>[7]</sup> Gastric disorder is a common medical problem in India.<sup>[8]</sup> The incidence of gastritis in India is approximately 3 in 869 that is about 40,76,411 people suffering from gastritis out of the total 1,380,004,385 population. Frequency of gastritis<sup>[9]</sup> is decreasing in the developed world but increasing in the developing countries.

*Helicobacter pylori* provokes chronic gastric inflammation that leads to the development of serious gastric diseases like gastritis,<sup>[10]</sup> peptic ulcers, gastric cancer<sup>[11]</sup> and mucosa associated lymphoid tissue lymphoma.<sup>[12]</sup> It is known that these ailments can be avoided if the infection by the bacteria can be prevented or eradicated. This is where naturopathy and yoga can play a crucial in building the immunity in individuals

prone to the infections.

Currently, numerous anti-biotic based therapies are available. However, recent studies suggest that focus must be given to develop new treatments using natural resources such as plants,<sup>[13]</sup> pro- biotics and nutraceuticals. The synergism of allopathic and alternative treatments is most likely the best choice to treat cases of Gastritis.

#### METHODOLOGY

**Subjects:** With the end goal of the survey on gastritis, patients were analysed accordingly. 113 patients of both male and female genders natured in the vicinity of 30-60 years were entitled for the survey. The subjects were recruited from SDM Yoga and nature cure hospital-Shantivana, Dharmasthala, Dakshina Kannada, Karnataka.

**Criteria for diagnosis:** All the patients with symptoms of gastritis were analysed and short listed for the study based on the accompanying criteria:

1. Robert G Strickland and Ian R MacKay's classification of gastritis.
2. Sydney system developed by Robin Warren and

Barry Marshall.

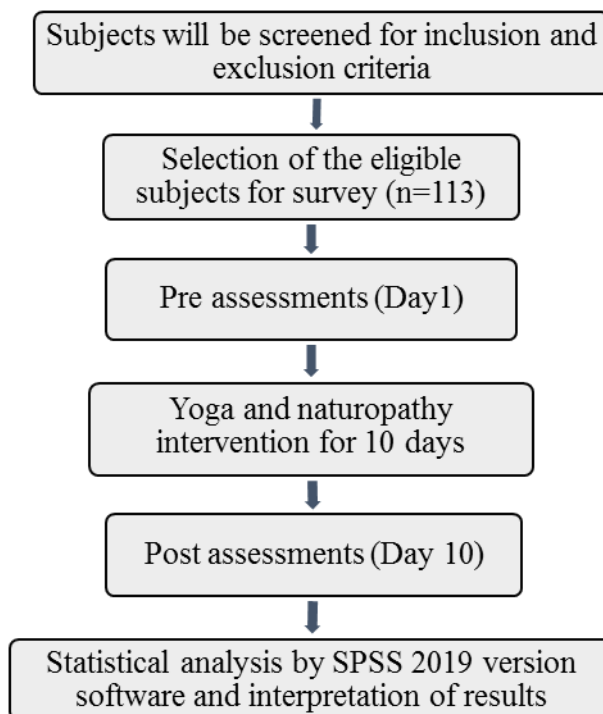
The subject must present at least three of the following symptoms:

- Pain abdomen
- Nausea
- Vomiting
- Heart burn
- Bloating
- Headache
- Belching

**Ethical considerations:** Signed informed consent was obtained from the participants before the commencement of the study in the study after explanations of protocol of the study. The approval from the Institutional Ethics Committee was taken.

**Methods:** The study subjects were identified and screened as per the demands of the inclusion and exclusion criteria. Pre-assessment prior to the intervention and post assessments were done after completing the 10 days of intervention using the variables.

#### Illustration for the study



**Treatment protocol:** Patients were given Naturopathy and Yoga interventions. It includes yoga, hydrotherapy, diet therapy, mud therapy and manipulative therapy. The

following integrated yoga and naturopathy protocol was used for all the subjects for ten days duration. The patient was prescribed Naturopathy based diet.

**Diet protocol.**

Day	7:30am	9:00 am	11:00 am	2:00pm	4:00pm	6:30pm
1	Ash gourd juice	Carrot juice	Rice, papaya, butter milk	Carrot juice	Cucumber	Chapathi, Boiled vegetables, apple, buttermilk
2	Ash gourd juice	Carrot juice	Rice, papaya, butter milk	Carrot juice	Cucumber	Chapathi, Boiled vegetables, apple, buttermilk
3	Ash gourd juice	Carrot juice	Rice, papaya, butter milk	Carrot juice	Cucumber	Chapathi, Boiled vegetables, apple, buttermilk
4	Ash gourd juice	Carrot juice	Rice, papaya, butter milk	Carrot juice	Cucumber	Chapathi, Boiled vegetables, apple, buttermilk
5	Ash gourd juice	Carrot juice	Rice, papaya, butter milk	Carrot juice	Cucumber	Chapathi, Boiled vegetables, apple, buttermilk
6	Ash gourd	Carrot juice	Rice, papaya, butter milk	Carrot juice	Cucumber	Chapathi, Boiled vegetables, apple, buttermilk
7	Ash- gourd juice	Carrot juice	Rice, papaya, buttermilk	Carrot juice	Cucumber	Chapathi, Boiled vegetables, apple, buttermilk
8	Ash gourd juice	Carrot juice	Rice, papaya, butter milk	Carrot juice	Cucumber	Chapathi, Boiled vegetables, apple, buttermilk
9	Ash gourd juice	Carrot juice	Rice, papaya, butter milk	Carrot juice	Cucumber	Chapathi, Boiled vegetables, apple, buttermilk
10	Ash gourd juice	Carrot juice	Rice, papaya, butter milk	Carrot juice	Cucumber	Chapathi, Boiled vegetables, apple, buttermilk

**Treatment protocol**

Day	7:30	8:00am	2:00 pm	2:30 pm
1	Eye and abdomen pack	Steam bath	Eye and abdomen pack	Cold hip bath
2	Eye and abdomen pack	Sauna bath	Eye and abdomen pack	Cold immersion bath
3	Eye and abdomen pack	circular jet	Eye and abdomen pack	Cold spinal spray
4	Eye and abdomen pack	Full body massage	Eye and abdomen pack	Cold spinal bath
5	Eye and abdomen pack	Full mud bath	Eye and abdomen pack	Hot arm and foot bath
6	Eye and abdomen pack	Abdomen massage	Eye and abdomen pack	Cold hip bath
7	Eye and abdomen pack	Colon hydro therapy	Eye and abdomen pack	Cold immersion bath
8	Eye and abdomen pack	Deluxe hydro massage	Eye and abdomen pack	Cold spinal spray
9	Eye and abdomen pack	Cold underwater massage	Eye and abdomen pack	Cold spinal bath
10	Abdomen pack, Eye pack	SG massage	Abdomen pack, Eye pack	Hot arm and foot bath

**Yogic interventions:** The restorative yoga intervention was created by an expert yoga panel employing Iyengar poses<sup>[25]</sup> and Iyengar influenced poses.<sup>[26]</sup> Includes asanas

(standing, supine, prone and sitting series), pranayama, kriyas (jala neti, sutra neti, vamana dhouti) and relaxation techniques.

Standing series asanas	Trikonasana, Tiryak Bhujangasana, Katichakrasana, Padahastasana, Ardha kati chakrasana, Tadasana.	10 minutes
Supine series asanas	Shavasana, Pavanmuktasana, Sarvangasana, Viparitarini, Halasana	10 minutes
Prone series asanas	Bhujangasana, Shashankasana, Makarasana, Shalabhasana	10 minutes
Sitting series asanas	Vajrasana, Paschimottanasana, Ardha matsyendrasana, Janu shirshasana, Padmasana.	10 minutes
Pranayama	Sheetali, Sheetkari, Sadanta, Chandra anuloma viloma	5 minutes
Kriyas	Jalaneti, Sutra neti, Vamana dhouti, Kapalbhathi	First 3 days Daily once from each nostril 20 minutes

## RESULTS

The present investigation was directed to evaluate and assess the effect of naturopathy and yoga intervention on Visual analogue scale (table.3) for pain as well as Likert symptomatic severity scale and personal satisfaction in patients with Gastritis and now length results were analysed. The information was taken at both benchmark and post intervention.

The outcomes indicated were noteworthy in seriousness of pain. Improvement of condition of gastritis and in general physical wellbeing is seen. There was not a huge contrast in the variables like nausea and headache in the subjects considered. From figures 1 and 2, a significant decrease can be noticed in the variables like pain abdomen, vomiting, heart burn, bloating and belching.

### A. Visual Analogue Scale (VAS)

Table.1 Paired Samples Statistics.

	Mean	N	Std. Deviation	Std. Error Mean
Pre-VAS- Post VAS	3.106	113	1.021	0.096

### Paired Samples Co-relations

	N	Correlation	Sig
Pre-VAS-Post VAS	113	.952	.000

### Paired Samples test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair VAS	Pre VAS – Post VAS	3.106	1.021	.096	2.916	3.296	32.344	112	.000

### B. Likert symptomatic severity scale

Table.2 Paired Samples test.

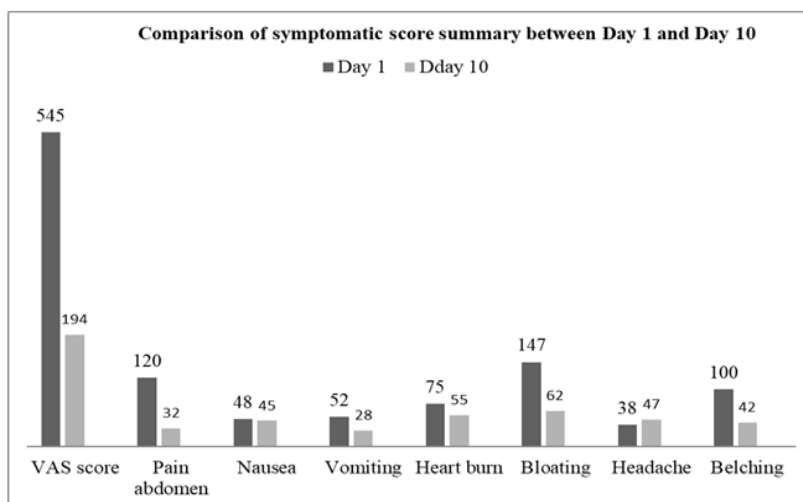
Pre-pain-post pain		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre Pain – Post Pain	.779	.776	.073	.634	.923	10.666	112	.000
Pair 2	Pre Nausea – Post Nausea	.027	.725	.068	-.109	.162	.389	112	.698
Pair 3	Pre Vomiting – Post Vomiting	.212	.574	.054	.105	.319	3.933	112	.000
Pair 4	Pre & post Heart burn	.177	.555	.052	.074	.280	3.392	112	.001
Pair 5	Pre bloating – bloating	.752	.774	.073	.608	.896	10.334	112	.000
Pair 6	Pre headache- headache	-.080	.585	.055	-.189	.029	-1.448	112	.150
Pair 7	Pre & Post belching	.513	.696	.065	.384	.643	7.841	112	.000

**Table.3 Comparison of symptomatic score summary between day 1 and day 10.**

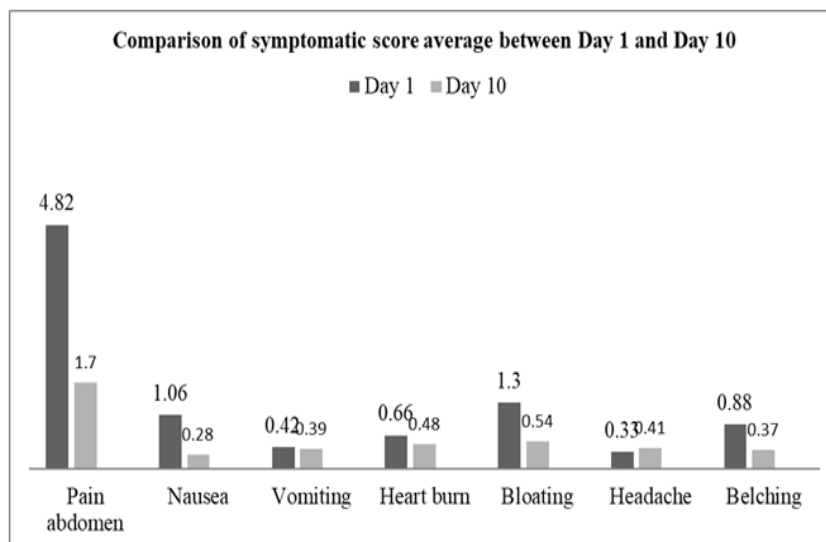
Symptoms	Day 1	Day 10
VAS score	545	194
Pain abdomen	120	32
Nausea	48	45
Vomiting	52	28
Heart burn	75	55
Bloating	147	62
Headache	38	47
Belching	100	42

**Table.4 Comparison of symptomatic score average between day 1 and day 10.**

Symptoms	Day 1	Day 10
Pain abdomen	4.82	1.71
Nausea	1.06	0.28
Vomiting	0.42	0.39
Heart burn	0.66	0.48
Bloating	1.3	0.54
Head ache	0.33	0.41
Belching	0.88	0.37



**Figure.1**



**Figure.2**

## DISCUSSION

The main aim of the study was to evaluate the influence of Yoga and naturopathy treatments on alleviating the symptoms like pain abdomen, belching, bloating, heart burn and improving the quality of life in patients with Gastritis.<sup>[14]</sup> We used self-reported visual analogue scale (VAS) and Likert symptomatic severity scale. This is a survey study with a sample size of 114 subjects. Gastritis occurs when the gastric mucosa is continuously exposed to many noxious factors and gastric protection aimed mainly to reduce or prevent the chemically induced acute hemorrhagic<sup>[54]</sup> erosions which is exerted by compounds such as prostaglandins (PG) and SH derivatives without inhibiting acid secretion. Our present study shows maximum prevalence of gastritis above 30 years of age, these results are similar to the study conducted by Poddar U and Thappa B R in the year 2014.

Present study shows a significant difference in reducing the pain, heart burn, improvement in the digestive functions, physical health, emotional health, social functioning,<sup>[15]</sup> emotional well-being, fatigue and energy. We observe that the pre- and post-measurement of all variables under consideration are significant at the **5 percent level of significance** as 'p' value is **less than 0.05**

expect Nausea and Headache variable. It can be concluded that treatment is effective expect nausea and headache.

There are many therapies that can cure Gastritis, naturopathy and yoga is one of them. They are considered to be the drugless systems of cure. They include hydrotherapy, diet therapy, and yoga practice and so on.<sup>[16]</sup> It is better to treat any acute or chronic pathological condition by these therapies. Naturopathy and Yoga does not only concentrate on removing the etiology but also cure the individual as a complete.

Naturopathic diet plays a vital role in reducing the symptoms of gastritis and several mechanisms have been hypothesized based on studies of host intestinal epithelial or immune cell responses<sup>[17]</sup> to pro-biotic strains. Pro-biotic bacteria can inhibit *H.pylori* by either immunological or non-immunological mechanisms.<sup>[58]</sup> Various pro-biotics like buttermilk have shown to exert favourable effects and prophylactic effects against *H.pylori* infection.

Use of hydrotherapy in the form of packs and compresses<sup>[18]</sup> such as cold abdominal pack have tremendous effects in reduction of gastritis and peptic ulcer size and enhanced resistance to stressful factors. Effectiveness in rehabilitation of patients with gastric dysfunction and pain abdomen is evident. Studies demonstrate a hydrotherapy effect of reduced epi-gastric pain as well as heart burn by enhancing the digestive functions.

Vestibular stimulation may prevent or delay gastritis through relieving stress by regular practice of yoga.<sup>[19]</sup> Gastric parietal cell secretion is depressed by enhanced sympathetic nervous activity. In a stressed situation, immune system becomes less capable of handling the germs around, white blood cells are less active in the lining of the stomach to kill the germs (*H pylori*) which allows the germs to penetrate the lining and the deeper layers of the stomach.<sup>[19]</sup> Vestibular stimulation inhibits the stress axes and HPA axes directly and indirectly and brings stress to a lesser condition. Hence, we can hypothesize that yoga can be beneficial in relieving most of the symptoms of gastritis.<sup>[19]</sup>

There were no noticeable changes in the aspect of nausea. We can infer that it might be because of the underlying derangements in digestion and absorption in an individual or due to recurrence of migraine headache in few subjects after the admission into the hospital. However, nausea had a decrease in its intensity on the tenth day compared to that of the first day.

Another interesting finding was increase in the variable of headache.<sup>[20]</sup> This could have probably been due to various factors affecting the individual such as sudden change in the environment, fasting, change in the dietary habits, as a withdrawal symptom of coffee and tea consumption.<sup>[20]</sup> The study conducted here was to evaluate the effectiveness of naturopathy and yoga intervention in Gastritis. As the results here have shown that the interventions given were effective as an alternate therapy in case of gastritis.

## CONCLUSION

There is strong evidence from prospective results to support the positive effects of alternative systems of medicine on Gastritis by expanded use of healthy bland and alkaline diet, stress management, hydrotherapy and mud therapy treatments and practice of yoga among individuals victimized by gastritis. Considering the beneficial effects of the bio-treatments included under the interventions of Naturopathy and yoga, it would be advisable to include them as an adjunct in conventional treatments program to reduce the side effects derived from the intake of drugs and also in satisfactory control of the symptoms occurring due to Gastritis.

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