

Gastritis in Adults:It's Causes and Consequences in Urban Areas: A Case Study

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ABSTRACT

Gastritis is a very common health problem in India. There are numerous incidence of gastritis in Indian population about 25% - 33% of the population is affected, particularly among adults and old people (age between 15 – 50 years). The present study would discover the ill effects on the human body physically and psychologically. The scope of the study was urban area of Muzaffarpur district of Bihar. The sample of study would be analysed on the basis of statistical scale. Gastritis causes abdominal pain or belly pain, indigestion (dyspepsia), bloating, aerography, nausea and vomiting. It is a complex condition mainly due to :Bacterial, viral infection or any micro flora invasion or ingestion, by excess intake of spices / condiments / fats and oils, over consumption of carbonated drinks or Alcohol, food intolerance or food allergy, drugs or medications, unhealthy lifestyle. It is the most common disease in the world. The health of an individual is not depends only upon the physical status, mental stage, psychological aspects, it also depends upon the internal metabolic changes, digestion, absorption, regulation of nutrients and bowel movements.

Key Words : Dyspepsia, Aerography, Digestion, Bowl movement

INTRODUCTION

Gastritis is the most common disease in the world. The health of an individual is not depends only upon the physical stage, mental condition, psychological aspects; it also depends upon the internal metabolic changes: digestion, hormonal secretions, enzymes activity, absorption, excretion and the bowel movements. Gastritis is an inflammation, irritation, or erosion of the lining of the stomach. It causes abdominal pain or belly pain, indigestion (Dyspepsia), bloating (a buildup of gas in the stomach and intestine), aerography (air is swallowed with food, while gas is fermentation of the food in the stomach due to wrong eating habits), nausea (a queasy sensation including an urge to vomiting), vomiting, acidity or acid reflux.

As the gastritis is an inflammation of the gastric (stomach) mucosa, it may affect the part or the entire stomach. During digestion stomach produces highly acidic

digestive juices that help into the breakdowns of the complex foods to the simplest forms. This is an obviously a very important process to provide nutrients and nourishment to the body. But in order for the stomach acid to not corrode the stomach itself a layer of mucus coats the lining of the stomach, which is a key part of defensive forces that protects the lining of the stomach from acid damage.

As we know that gastritis is an inflammation of the lining of the stomach, it is may be occurs as a short term or may be long duration. Sometimes it has no symptoms called asymptomatic gastritis. But in symptomatic gastritis, it presents the condition of abdominal pain (abdominal discomfort). Gastritis is inflammation of the gastric mucosa caused by any of the several conditions, including infection, drugs, medications, stress, trauma and autoimmune. In most of the cases are asymptomatic, but mostly associated with dyspepsia and gastrointestinal bleeding or ulcer. Gastritis and gastropathy are conditions

that affect the stomach lining, also known as the mucosa. In gastritis, the stomach lining is inflamed. In gastropathy, the stomach lining is damaged, but little or no inflammation is present.

The inflammatory spectrum of gastric diseases includes different clinic-pathological entities, it is self-limiting and non-self-limiting (called long lasting) inflammatory diseases, and latter linked to the result of gastric cancer (Inflammation associated cancer), which is commonly caused by the untreated gastric issues (by infection of *H. pylori*, *E. coli* and more).

The most common symptoms include – nausea, abdominal bloating, indigestion, and abdominal pain, hiccups, burning sensation of food pipe, acid reflux and more.

Types of Gastritis (According to Sharon Gillson):

The symptoms of gastritis can come on suddenly and last for a short time. This is called acute gastritis. Chronic gastritis means symptoms persist for months or even years. Chronic gastritis is much more likely to lead to complications like gastritis go on to develop gastric cancer, but this is rare. Gastritis can also be categorized as erosive or non-erosive based on how severely injured the mucosal lining of the stomach is.

- **Erosive gastritis** -is more severe than non-erosive gastritis, as it wears away the stomach lining, leading to the formation of sores called erosions. If left untreated, these sores can penetrate deeper into the stomach mucosa and form painful ulcers.
- **Non-erosive gastritis**- the stomach lining is changed as a result of the underlying inflammation; however, there is no wearing away of the lining, so no erosions or ulcers develop.

Gastritis can be grouped under two distinct categories, according to the sign and symptoms of the patient:

Acute Gastritis:

The main symptom of the acute gastritis are pain, nausea, vomiting, abdominal distention, bloating, breathlessness, indigestion, acidity and acid reflux.

Chronic Atrophic Gastritis:

The main symptom of chronic atrophic gastritis are sever pain, recurrent vomiting and nausea, abdominal

discomfort, loss of appetite, dyspepsia, stomach bleeding, stomach ulcer, pernicious anaemia, nutritional deficiency and weight loss.

Symptoms and Complications of gastritis: (Minesh Khatri, MD on November 27, 2022):

- 1) Abdominal pain
- 2) Nausea
- 3) Black and tarry stool
- 4) Vomiting
- 5) Dyspepsia
- 6) Bloating
- 7) Loss of appetite
- 8) Heartburn
- 9) Flatulence
- 10) Rabid heart beats
- 11) High blood pressure
- 12) Weight loss
- 13) Headache
- 14) Indigestion
- 15) Acidity
- 16) Acid reflux
- 17) Stomach bleeding
- 18) Stomach ulcer
- 19) Pernicious anaemia
- 20) Autoimmune problems

Causes of gastritis- (B Sri Laxmi 7th edition):

The causes of gastritis are numerous but below mentioned are few of them:

Infection (*H. pylori*), Alcohol, Smoking, Genetic, Hormonal imbalance, Overeating Medications, Food addiction, Inactivity, Bulk eating, Psychological factors, Eating habit, Sedentary worker, Community issues, Other diseases, Carbonated drinks Spicy or oily foods Packed / processed / canned foods Frozen / junk foods and Long meal gaps.

Treatment of gastritis: Dr. S. Sagin Raj :

The main principles of the treatment of the gastritis (Acute Gastritis and Chronic Atrophic Gastritis) are discussed below :

1. Medicinal treatment
2. Dietary supervision
3. Physical activity

A person should meet a doctor if the symptoms of acidity or gastritis appear more than two times a week. The physician normally recommends antacids to give aid

against the symptoms. A doctor may also suggest these tests:

- **pH monitoring** : This test is carried out to verify the presence of acid in the oesophagus. Under pH monitoring, a device is put inside the oesophagus to measure the amount of acid.
- **Upper gastrointestinal endoscopy:** Through this, a medical expert is enabled to examine the lining of the stomach and the oesophagus. A thin flexible tube equipped with light and camera is inserted into the throat to check for the inflammation caused by excessive acid production.
- **X-ray:** Under this, a chalky suspension is consumed by the patient which coats the digestive tract after which an x-ray is conducted.

Treatment of gastritis helps in decreasing the acidity in stomach to relieve the symptoms and also helps in healing of the stomach lining. Treatment includes:

- Antacids are available over the counter, act to neutralise the acid in the stomach, providing rapid pain relief.
- Histamine 2 blockers such as ranitidine act to reduce acid production and are available over the counter as well as on prescription.
- Proton pump inhibitors such as omeprazole decrease acid production effectively than Histamine 2 blockers. Low dose PPIs can be bought over the counter whereas higher doses need prescriptions.
- Antibiotics are Amoxycillin, Metronidazole and Clarithromycin are prescribed for treating H.pylorii Infection. A retest may be performed 4 weeks after completing the antibiotic course to check if there is any H.pylorii is left in the stomach. If there is still some infection, eradication therapy is required with a different set of antibiotics.

Review of Literature (Collection of the summary):

– “Gastritis is inflammation of the gastric mucosa caused by any of the several conditions, including infection, drugs, medications, stress, trauma and autoimmune. In most of the cases are asymptomatic, but mostly associated with dyspepsia and gastrointestinal bleeding or ulcer.” (By- MD. Nimish Vakil, University of

Wisconsin School of Medicine and Public Health, Germany)

– The causative spectrum of gastric diseases includes different clinic-pathological entities, it is self-limiting and non-self-limiting (called long lasting) inflammatory diseases, and latter linked to the result of gastric cancer (Inflammation associated cancer), which is commonly caused by the untreated gastric issues (by infection of H. pylori, etc.) (By-www.webmd.com)

– “Gastritis is an irritation, erosion or inflammation of the inner stomach lining. It is commonly acute or gradually increases to chronic. The most common symptoms include – nausea, abdominal bloating, indigestion, and abdominal pain, hiccups, burning sensation of food pipe, acid reflux and more.” (By-www.sciencedirect.com, Gastritis: The clinic-pathological spectrum).

– “Gastritis is a complex condition where the mucous (membrane or lining) of the stomach are inflamed due to toxin of any microbes (bacteria or virus), direct irritation of the mucous lining of stomach by some certain drugs, infected or allergic foods, alcohol abuse, smoking, physical inactivity and injury or trauma.” By- Dr. M. Swaminathan, Advanced Text – book on – Food and Nutrition (Volume – 2), D.Sc. F.N.A.

– “Gastritis is commonly caused by irritation of gastric mucosa or stomach lining due to the excessive alcohol, stress, medication, excessive vomiting, injury or accidents.” (By- www.webmd.com, Digestive disorder)

– “Gastric inflammation of mucosa results in gastric ulcer, which consider as many nutritional diseases such as vitamin c deficiency – skin diseases, thiamine deficiency– beri-beri, calcium & vitamin D deficiency– osteoporosis, Iodine deficiency – cretinism, and many other diseases or the poor nutritional status, a diminished mucosal blood flow and a defect in the inhibition of gastric juice (gastric acid) and pepsin secretion (an enzyme). Where the proper diffusion of HCl (hydrochloric acid) or hydrogen ions into the mucosa (mucus lining) and over secretion (reflux) of bile juice (bile salts) are considered as the main causative factor of gastritis and more prone to the development of malignant diseases or gastric cancer.” (By –B Shrilakshmi, MSc., MPhil, Book– Dietetics, 7th Edition, “Diet In Gastrointestinal Diseases”, page no-289)

Objective of the Study:

As we know the incidence of gastritis is common

among the Indian population about 25% - 33% of the population is affected, particularly among adults & old people (age between 15 – 50 years). The scope of the study was urban area of Muzaffarpur district of Bihar. The sample of study would be analysed on the basis of statistical scale.

The main objectives of the research study are as follows:

1. To study the disease
2. To study the causes & consequences of gastritis
3. To know the reason of gastritis and its prevalence

Sample design and selection of sample:

Three stage sampling procedures were adopted for study:

Stage 1- selection of area:

The area selected for the dietary survey in Muzaffarpur. This is an urban area of Bihar.

Stage 2- selection of subject:

The subject is selected in the urban area of Muzaffarpur. Where I collected data related of the causes and complication of gastritis.

Stage 3- selection of tools:

An interview schedule was formulated to elicit information through Google Forms by where there a multiple choice question on health status, food consumption, life style, bad habits, family history, complication, medication & many more to collect the actual tools for the research study.

METHODOLOGY

Methodology of information and data collection :

The research study method was adopted in order to collect the data of person having gastric issues by name, age, sex, weight, height, activity, meals per day, food habits, physical activity, complications, medications, co-morbidity, heredity, water intake, addiction and sleeping pattern with the help of questionnaire google forms. The research study was conducted to find out the prevalent gastric issues and its causes and consequences in adults in urban areas of Muzaffarpur district of Bihar. The detailed Questionnaire used during this research study is given in the analysis of the result.

Analysis of the research:

Research was performed through the Google forms- “A research paper on Gastritis in adults: its causes and consequences in urban areas “where I have selected 100. A number of data selected to find the actual analytical results given as follows:

1. Name
2. E-Mail-
3. Sex : In this research survey both the male and female were participated (Fig. 1) :
 - (a) Male – 28%
 - (b) Female – 72%

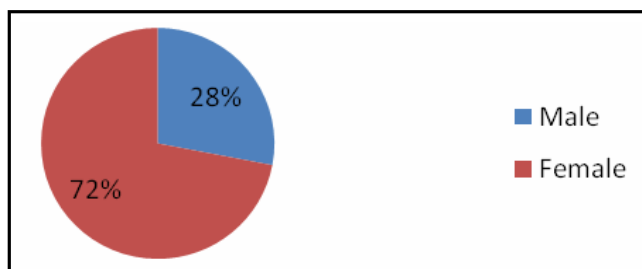


Fig. 1 : Classification of sex

4. Age : As research is programmed for adults minimum age of the participant is 18 years & maximum age of the participant is 73 years, but the maximum participant of about 88% are in between 18–40 years of age.
5. Height : As research is programmed on adults of both sex minimum heights is 4’7 and maximum height is 5’9.
6. Weight : In this research minimum weight of the participant is 40 kg and maximum weight is 95 kg.
7. Activity : Activity denotes the physical activity of the participant (Fig. 2) :
 - (a) Sedentary (less active) – 22%
 - (b) Moderate active – 67%
 - (c) Heavy worker – 11%

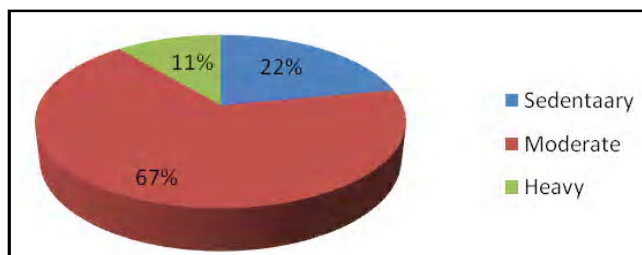


Fig. 2 : Physical activity

8. Meals per day – Frequency of meals per day (Fig. 3):
- (a) ≥ 3 meals – 32%
 - (b) 4 – 5 meals – 50%
 - (c) 5 – 6 meals – 13%
 - (d) 7 and more meals per day – 5%

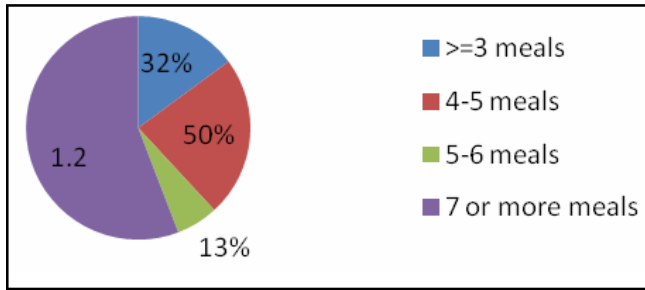


Fig. 3 : Frequency of meals

9. How often you take tea / coffee / cold drinks (carbonated drinks) per day (Fig. 4)
- (a) No – 29%
 - (b) 2 cups – 47%
 - (c) 2 – 4 cups – 17%
 - (d) More than 5 cups – 7%

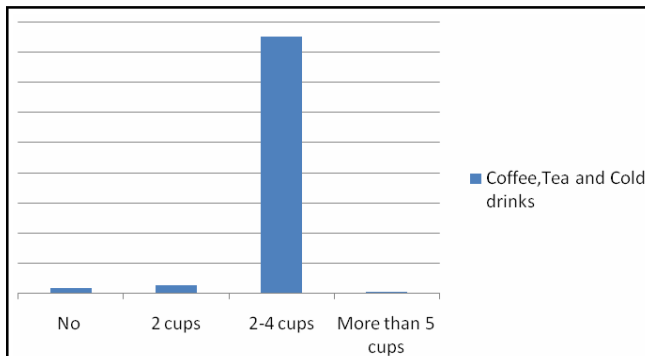


Fig. 4 : Coffee, Tea and Cold drinks

10. Are you –
- (a) Vegetarian – 21%
 - (b) Non. Vegetarian
 - (c) Eggetarian – 11%
 - (d) Vegan (No animal products like– milk, cheese, curd, etc.)–1%
11. How often you perform Exercise / Yoga / Walking / Running / Cycling / Zumba / Gym or any Sports:
- (a) Everyday – 35%
 - (b) Twice or thrice a week – 34%
 - (c) Sometimes / occasionally – 31%

12. Do you have any stomach related issues?
- (a) Acid reflux / heart burn – 14%
 - (b) Mild or sever abdominal pain (stomach cramp) – 19%
 - (c) Indigestion / Bloating – 14%
 - (d) Constipation / diarrhoea –14%
 - (e) None – 39%
13. How often you feel abdominal discomfort (stomach / abdominal *pain*):
- (a) Always – 8%
 - (b) Twice or thrice a week – 18%
 - (c) Sometimes / occasionally – 74%
14. How often you take outsider foods (junk foods / packed foods / canned foods / any street foods)–
- (a) Always – 11%
 - (b) Twice or thrice a week – 19%
 - (c) Weekly - 31%
 - (d) Occasionally – 39%
15. Are you taking medication of gastric issues (gastritis / indigestion) (Fig. 5):
- (a) Yes – 21%
 - (b) No – 79%

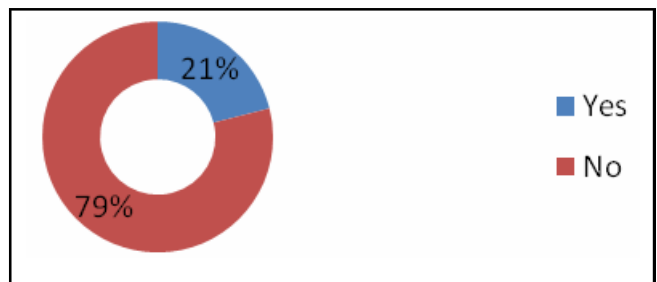


Fig. 5 : Medication of Gastric issues

16. Do you have other disease or illness (any of the given co-morbidity):
- (a) No – 78%
 - (b) Blood pressure / Heart disease – 7%
 - (c) Diabetes / kidney disease – 2%
 - (d) Thyroid / any other – 13%
17. Heredity / Genetic / Family history of gastritis:
- (a) No – 56%
 - (b) Yes – 44%
18. Are you suffering from any of these?
- (a) Nausea / vomiting – 0%
 - (b) Loss of appetite / Pain in abdomen – 17%
 - (c) Any infection (*E. coli* / *H. pylori* / any food poisoning / food allergies)- 4%

- (d) All (mentioned above)–3%
 - (e) None – 76%
19. Water intake per day:
- (a) 1 – 2 litters – 35%
 - (b) 3 litters – 51%
 - (c) More than 3 litters – 14%
20. Any addiction (Bad Habits) (Fig. 6):
- (a) Smoking – 2%
 - (b) Alcohol – 0%
 - (c) Cold drinks – 9%
 - (d) All – 0%
 - (e) None – 89%

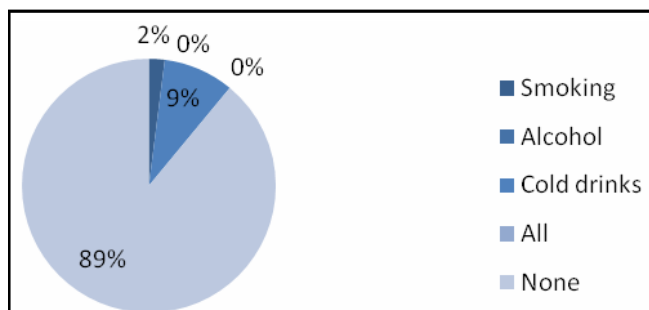


Fig. 6 : Any addiction

21. Sleeping hours per day:
- (a) Less than 6 hours – 4%
 - (b) 6 hours – 26%
 - (c) 8 hours – 62%
 - (d) More than 8 hours – 8%

RESULTS AND FINDINGS

The present study was undertaken to find out the causes and consequences of gastritis in adult in urban areas of Muzaffarpur district of Bihar State. 100 participants were selected and filled the google form.

The background information of respondent through google form with the help of schedule design for the research project. The questionnaire evaluated information

about their sex, age, weight, height, physical activity, food habits, meals per day, stomach related issues, co-morbidity, genetic / heredity or family history, medication for gastritis, water intake per day and sleeping time per day.

The result and findings of the research project revolve the following:

1. About 72% female and 28% male where participated, most of the participant was in between 18 – 40 years. Most of the participant is moderately activity, which is 67%.
2. About 50% of the participants were having 4 – 5 meals per day, 4% are taking 2 cups of tea / coffee / cold drinks per day, 67% are non-Vegetarian, 35% people are doing sports everyday, 39% have no stomach related issues, 74% feel abdominal discomfort.
3. About 44% have heredity, 39% have occasionally outsider foods, 78% have no other disease, 17% are suffering from loss of appetite, 51% water per day 3 litters and 8hours per day 62%.

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