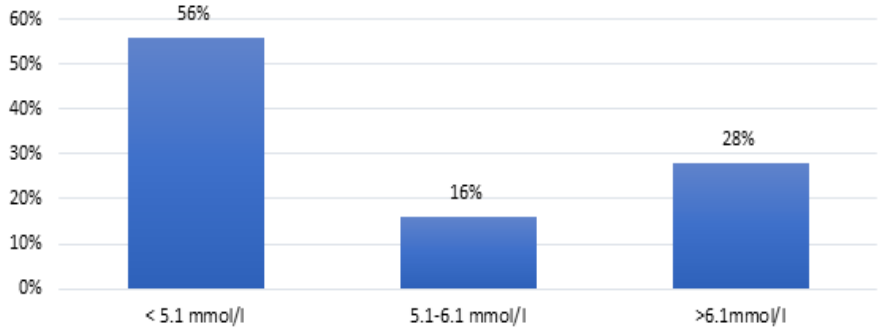

Figure 1 – Comparison of blood cholesterol level in patients with BMI ≥30 kg/m²

Conclusion

In this study we can conclude that BMI ≥30 is a risk factor for early development of atherosclerotic coronary artery disease. Our study has some limitations such as small sample size and it is only one hospital based. Severity of this disease in patients is depends on the modifiable and non-modifiable risk factors such as the male gender and smoking or greater than one risk factor, respectively. Early lifestyle modification including increasing cardiorespiratory fitness and muscle strength had up to a 35% reduction in all-cause mortality [4]. And by reducing arterial pressure, preventing left ventricular hypertrophy, decreasing insulin resistance, and decreasing blood cholesterol level also helps to decrease the mortality. Mortality was decreased not only in obese patients but also in normal weight individuals. Weight loss also proved to significantly lower the rate of adverse outcomes even after adjustment for age, sex, smoking, dyslipidemia, DM, HTN, MI, depression, and obese status [4]. Therefore, it is more important for patients with BMI to increase exercise and lose weight. Education on these principles may helpful to decrease incidents of cardiovascular diseases associated with obesity.

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THE DIAGNOSTIC APPROACHES FOR DETECTING HELICOBACTER PYLORI INFECTION AND ASSESSING GASTRIC CANCER RISK IN INDIA AND UNDERSTANDING SOCIOECONOMIC FACTORS INFLUENCING H. PYLORI INFECTION

Introduction

Helicobacter pylori (*H. pylori*) is a spiral-shaped, flagellated organism that can grow in the acidic environment of the human stomach. *H. pylori* infection is a notable risk factor for gastric

cancer, particularly in countries like India with a high prevalence of both conditions. Presence of any infectious agents in stomach was a big query among the microbiologists and gastroenterologists [1]. Helicobacter pylori is a gastrointestinal pathogenic organism that infects almost half of the world's population [2]. Gastric cancer is a major cause of cancer death worldwide, and comes 3rd in position, especially in developing countries like India (it comes in 2nd position). Gastric cancer occurs when the cells in the stomach lining proliferate uncontrollably, forming tumors that invade normal tissue and result in micro metastasis [3]. The cag A (cytotoxin associated gene A) gene of H. pylori is the main virulence factor responsible for gastric adenocarcinoma development [3, 4]. Strains with multiple cag A tyrosine phosphorylation motifs are more associated with gastric cancer than those with fewer phosphorylation motifs, which may cause gastritis [3, 4]. The incidence of Gastric Cancer is 4 times higher in South India than in North India [2].

Goals

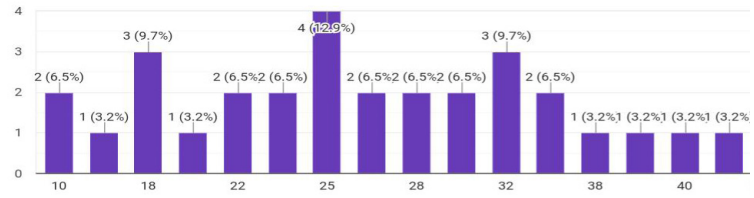
This paper aims to provide a detailed analysis of patients with H.pylori, the diagnostic approaches for detecting H. pylori infection and assessing gastric cancer risk in India. Additionally, it will investigate the socioeconomic factors that influence *H. pylori* infection within the Indian people.

Material and methods of research

A retrospective analysis medical records of patients who were diagnosed with *H. Pylori* infection was conducted from gastroenterology and oncology department of the multidisciplinary hospital in India. Total 30 patient's cases were taken to get a more precise and an accurate data for this research. A self-designed questionnaire was developed and given to them through Google forms. Statistical data processing was carried out using the MS Excel.

The result of the research and their discussion

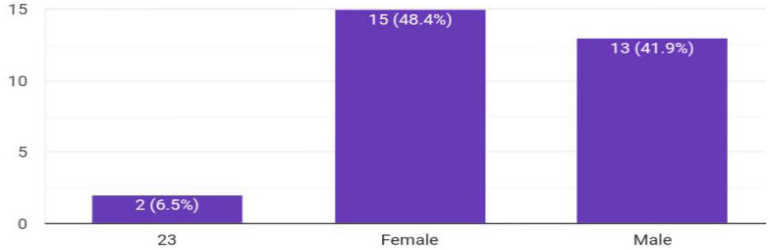
1. Structure of patients with *H.pylori* infection according age and gender.



Picture 1 – Prevalence of H. pylori on Age

As in Picture it can occur in any age group like 2 cases are of 10 years, old children and the maximum age group we obtained who is struggling with *H. pylori* is 42 years. Examining age-specific data unveils potential variations in exposure risk or immunity to *H. pylori* that evolve over a person's life.

In Picture 2, 15 cases of H.pylori were in females, while 13 cases were of males. As it affects all genders equally.



Picture 2 – Prevalence of H.pylori on Gender

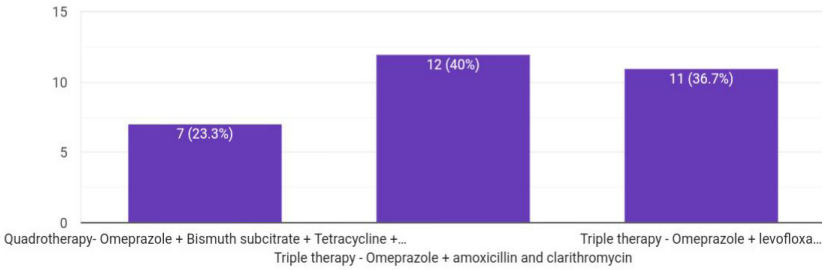
So, there were 2 cases of transgender too.

1. The diagnostic approaches for detecting *H. pylori* infection: Several diagnostic approaches are utilized to detect *H. pylori* infection in India, including invasive methods such as endoscopy with biopsy and non-invasive methods like urea breath tests, and blood tests.

17 patients – Breath test (red zone).

7 patients – Blood test (blue zone).

6 patients – Endoscopy (orange zone).



Picture 3 – Treatment used in eradication of H. pylori

The treatment used:

Quadrotherapy – Omeprazole + Bismuth subcitrate + Tetracycline + Metronidazole (given to 7 patients).

Triple therapy – Omeprazole + levofloxacin + metronidazole (prescribed to 11 patients).

Triple therapy – Omeprazole + Amoxicillin and Clarithromycin (prescribed to 12 patients).

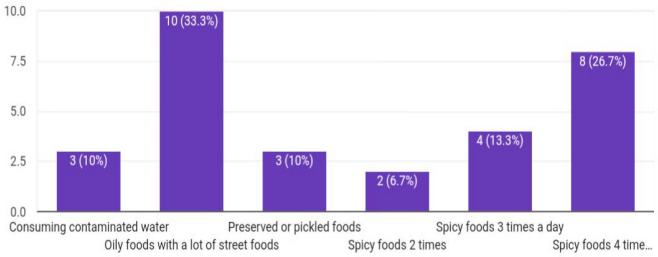
Asessing Gastric Cancer risk in India:

According to data we have from patients' answers:

16 patients diagnosed with suspicion to gastric cancer or precancerous condition (the red zone), and 14 patients are not having suspicion to Gastric cancer (the blue zone).

And the symptoms are as follows: abdominal pain or discomfort (60%), persistent indigestion or heartburn (50%), unexplained weight loss (40%), loss of appetite (30%), nausea and vomiting (20%), difficulty swallowing (20%), feeling full after eating small amounts (20%), fatigue or weakness (20%), blood in the stool (10%) and black, tarry stools (10%).

Factors contributing or seen in this 16 patients (with suspicion to gastric cancer) in the development of Gastric cancer (Picture 4).



Picture 4 – Specific dietary habits

Socioeconomic Factors Influencing *H. pylori* Infection and Treatment Outcomes:

The impact of socioeconomic factors on the incidence of *H. pylori* infection and the success of its treatment in India cannot be overstated. The most common answers from patients of this group were:

– poor sanitation;

– crowded living conditions;

– lower socioeconomic status, and
– limited healthcare access are intertwined with increased rates of infection.

Conclusions

In conclusion, the complex interplay between *H. pylori* infection, gastric cancer risk, and socioeconomic factors in India underscores the need for a multifaceted approach to addressing these public health challenges. By understanding the specific nuances of *H. pylori* infection within the Indian context and considering the socioeconomic determinants that influence disease dynamics, targeted interventions can be developed to mitigate the burden of gastric cancer and improve treatment outcomes. Moreover, the regional prevalence of *H. pylori* is subject to change due to influences like dietary habits, cleanliness practices, and socioeconomic factors.

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EFFECTIVENESS OF DIAGNOSTIC EXAMINATION OF COPD

Introduction

Chronic obstructive pulmonary disease (COPD) is a chronic inflammatory disease lung which may lead to airflow obstruction in lung. It is one of the major cause of morbidity and mortality worldwide among 70–80% of adult with undiagnosed COPD [1].

The two main common conditions that contribute to COPD are chronic bronchitis and emphysema. Smoking is one of the leading cause. The main challenge in early detection of COPD are, failure to identify early signs and symptoms and the lack of spirometry. [1] Patient with undiagnosed COPD are at risk of poor outcome and worsened life quality. That's why early detection of COPD is necessary to decrease the impact of COPD [1].

Diagnosis of COPD is confirmed when in the presence of risk factor exposure and respiratory symptoms, after inhaling bronchodilators[2]. Even though COPD is a progressive disease, it is treatable. With proper management patient can achieve effective symptom control and a quality of life.

Goal

This study aims to study the effectiveness of diagnostic examination of COPD.

Material and methods of research

Retrospective analysis of the case histories of patients who visited Gomel City Polyclinic No2 was done. This descriptive-analytical study was conducted on 25 patients who are being treated for COPD in the said polyclinic.

The gathered data was from January to December of 2019.