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RESEARCH ARTICLE

PREVALANCE OF HELICOBACTER PYLORI INFECTION IN DYSPEPTIC PATIENTS UNDERGOING UPPER GI ENDOSCOPY IN TERTIARY HOSPITAL

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Abstract

Background And Objectives:-Acid peptic disease comprises of a wide spectrum of diseases, which cause considerable morbidity. Helicobacter pylori, a curved rod-shaped bacterium, has been consistently associated with patients suffering from acid peptic diseases, more in ulcer disease than in non-ulcer disease. Due to this high association, it is now believed that helicobacter pylori plays an important role in the aetiopathogenesis of acid peptic disease.

Methods: We Have Attempted To Study The Prevalence Of H.Pylori In Patients Undergoing Upper GI Endoscopy In Patients With Dyspepsia At Our Pes Hopital(Pesimsr) ,Kuppam,AndhraPradesh.

Results:-Total Of 100 Upper Gastro Intestinal Endoscopies Were Performed And Biopsies Were Taken During The Study Period In Which Males Were More Infected With H.Pylori Infection In The Age Group Of 31-50 Years .

Conclusion:-The Burden Of H.Pylori Infection Among Dyspeptic Patients Was High.There Is Limited Access To Endoscopic Services And Widespread Prior Antibiotics as Empirical Treatment.

Introduction:-

Acid peptic disease is a world wide problem among all the age groups and both sexes. Duodenal ulcer is common as compared to gastric ulcer. Etiology of peptic ulcer is almost certainly multi-factorial. Infection with H.Pylori mainly

Occurs in early childhood and shows life-long persistence in most infected individuals.Because of the high risk of H.Pylori transmission from adults to children, especially from parents in a family setting, prevalence of H.Pylori in childhood is related to its prevalence in adults.

In addition to the virulence of H.Pylori, host and environmental factors determine clinical outcome. It has been reported that the prevalence of h. Pylori infection was related to several of these factors, including socioeconomic status,low levels of hygiene, age, geographical region, cigarette and alcohol consumption.

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Over the past few years a new line of thought has been evolved after isolating spiral campylobacter like organism from antral biopsy specimens. H pylori is now considered to be an important if not the only causative agent of gastritis and peptic ulcer disease. The dictum; no acid – no ulcer summarized the pathogenesis of peptic ulcer disease but new dictum seems to be; no h.pylori -no ulcer, as over90% of duodenal ulcer and 70% of gastric ulcer patients are infected by H.Pylori.

Dyspepsia is a prevalent complaint in general practice and gastrointestinal clinics.helicobacter pylori(h.pylori) were of major concern today because of its casual relationship with gastro duodenal disease. H.pylori is a gram negative microaerophilic bacterium that colonizes the gastric mucosa of more than half of the world's population with high geographic variability h.pylori infection is generally acquired during childhood and persists life-long in the absence of treatment with antibiotics .

Most of the infected individuals remain asymptomatic for a long period .as a result, long-term colonization of h.pylori can damage the gastric mucosa causing various diseases of upper gastro intestinal tract such as chronic gastritis,peptic ulcer,and gastric malignancies,particularly gastric cancer,and gastric mucosa-associated tissue(malt)lymphoma.

After the discovery of h.pylori by marshall and warren in 1983 by using warthin starry silver stain ,the etiological understanding of gastritis and its role as bacterial carcinogen have changed the management of gastritis.one half of the worlds population has h.pylori infection,with an estimated prevalance of more than 90%in developing countries.in our country,the reported prevalance of h.pylori ranged from 50% to 60% .the following study seeks to identify the prevlance of h.pylori based on histology and to correlate endoscopic findings with histopathology.

Material and Methods:-

Study design:
Observational study

Study setting:
PESIMSR hospital

Study period:
2022-2023

Study population:
Patients undergoing upper gi endoscopy

Sampling method:
Purposive sampling

Sample size:
100

Inclusion criteria:
Patients aged more than 18 years with symptoms of dyspepsia

Exclusion criteria:
Patients under treatment of proton pump inhibitors or antibiotics for a period of one month before using endoscopy was done.

Study tools:
Upper GI endoscopy

Method of collection of data:
Patients coming to general surgery opd of pesimsr

Statistical analysis of data:
Prevelance of H.Pylori.

Patient-Preparation:
Involved 6 hours of fasting, in conscious patients, a topical anesthetic xylocaine 5% was sprayed into the oropharynx to numb the gag reflex.sedation with intravenous midazolam 0.1 mg/kg was used at the discretion of the attendant.

Endoscopic evaluation of patients was carried out using fibre optic gastro-duodenoscope .instrument sterilization was done using a routine technique of cleaning the instrument with cetrimide ,70% alcohol, glutaraldehyde and later running equipment in distilled water for up to 30 min in between endoscopic sessions.patients were placed in the left decubitus with pulse oximetry monitoring of their vital sign by anesthetist. All anatomic regions of esophagus,stomach ,first parts of duodenum whenever possible were examined and endoscopic impressions noted. Pinch mucosal biopsies for histopathological diagnosis and H.Pylori detection were obtained from the antrum,stomach and suspicious areas for all cases.the diagnosis conformed to standards as reflected in the atlas of gastrointestinal endoscopy.

Results:-

Total of 100 upper gastro intestinal endoscopies were performed and biopsies were taken during the study period.the age of the patients range from 18-70 years , among all the patients majority were males and remaining were females but the prevalence rate is high on males

Table 1:- Gender.

VARIABLES	RATIO	HP(-ve)	HP(+ve)
MALES	3	30	40
FEMALES	1	2	28
TOTAL		32	68

Table 2:- Biopsy Report.

VARIABLES	HP(-ve)	HP(+ve)	TOTAL
18-30	4	10	14
31-50	8	24	32
51-70	40	14	54

Table 3:- Occupation.

VARIABLES	HP(-ve)	HP(+ve)	TOTAL
AGRICULTURE	8	22	30
STUDENTS	10	30	40
DAILY WAGE LABOURERS	20	10	30

Table 4:- Duration Of Symptoms.

DURATION OF SYMPTOMS	TOTAL
1-2 WEEKS	5
2-4 WEEKS	20
4-6 WEEKS	75

Discussion:-

We set out to establish the prevalence of h.pylori gastritis among patients presenting for endoscopic examination.
The prevalence of h. Pylori was statistically higher in younger patients. Factors such as severe atrophy or intestinal metaplasia mean that the local environment is no longer ideal for the growth of H.Pylori. This may contribute to the lower prevalence in elderly patients. H. Pylori infection can be related to low levels of sanitation, hygiene and education. In this study, no relationship was observed between educationalstatus and H.Pylori infection. However, further studies are needed, especially in poor socioeconomic and rural areas it has been reported that infection with

H.pylori can occur in childhood via the fecal-oral route and that it can result in the development of gastroduodenaldiseases. Therefore, H.Pylori infection in individuals with a family history can increase the risk of developing gastroduodenal diseases. In our study, we did not observe any relationship between H.Pylori Infection and family history. Future studies are needed to examine the differences between strains of H.Pylori concerning the effect of virulence factors in H.Pylori-related diseases.

The prevalence of H.Pylori in patients with heartburn was 90% which was similar to that of abdominal pain. Ingeneral, gastroesophageal reflux disease and heartburn were common in H.Pylori-negative patients.There was also high gastric acid secretion in H.Pylori negative patients. Endoscopic evaluation or measurement of output of gastric acid will be needed to clarify the difference.

We found that over 68% had h.pylori gastritis , according to **leila shokrzadeh et.al** 86% cases where h.pylori positive and that it took 4-6 weeks on average for the participants to access endoscopic services from the time of developing symptoms.**mohammad reza zali et.al** stated there were no difference in the gender prevalence but in our study more number of males were found to be identified with h.pylori infection.

H.pylori prevalence goes from less than 15% in some populations to virtually 100% depending on socio-economic status and country development.in this study those <50 years was 54%where as 46% were >50 years were prone to be for h.pylori. It is anticipated that the prevalence of h.pylori infection will decline as sanitary conditions improve and it is also a reflection of wide spread use of antibiotics.

Helicobacter pylori infection has been reported by several studies to be high in developing countries, and associated with low levels of education,low socio economic status,and poor sanitation.nsaid use and h.pylori infection have a significant impact on endoscopic findings while presence of h.pylori ,smoking and alcohol consumption are all associated with increased risk of developing chronic gastritis.

Conclusion:-

Upper GI endoscopy is one of the most important and simple screening method to identify ,prevent and eradicate the H.Pylori infection. With the goal of reducing the complications of h.pylori. The prevalence of h. Pylori infection in dyspeptic patients in the population around pesimsr ,kuppam was quite high.

The burden of H.Pylori infection among dyspeptic patients was high, there is limited access to endoscopic services and widespread prior antibiotics empirical treatment.Gastritis is the commonest finding at endoscopy in patients presenting with dyspepsia. Upper GI endoscopy is very useful in the process of preventing H.Pylori infection.

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