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RESEARCH ARTICLE

Awareness Level regarding *Helicobacter pylori* infection among General Physicians in Karachi-Pakistan

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Abstract

The survey was conducted to evaluate the level of awareness among General physicians working in the mega city-Karachi, Pakistan. This study was conducted on 68% of doctors belonged to government set up and 32% belonged to private hospitals. The result findings indicated that 70 % physicians were aware of *H. pylori* infection; 8% physicians first time heard about *H. pylori*. Furthermore, 34 % physicians responded that *H .pylori* can cause cancer. Majority of them believed that water is likely responsible for its transmission. Majority of physicians 46% viewed dyspepsia is a major sign for *H. pylori* clinical diagnosis. For preference of test 54% physicians suggested for invasive test on the contrary; 29% for non-invasive test. In the current study it was found that 49% got *H. pylori* knowledge by means of their medical text books, 21 For the sake of antibiotic therapy 67% responded triple therapy. Moreover, it was found that 59% of the doctors were aware of first line antibiotics and 33% were aware of second line of antibiotics. Regarding treatment duration about 80% of physicians suggest antibiotics for two weeks.

Introduction

Helicobacter. pylori was first identified approximately more than 100 years ago and its role in gastritis has been established since the 1970s (Marshall, 1989). *H. pylori* are gram-negative, spiral-shaped, flagellated bacteria found in the stomach (Sherwani *et al*., 2013). *H. pylori* is the most common worldwide human infection, being more prevalent in developing than developed countries, the prevalence being directly proportional to the economic conditions. The prevalence has been declining rapidly in developed countries like States where still 30-40% of the population is said to be infected, the number being higher in non-whites and immigrants (Frenck & Clemens, 2003). This infection is mainly acquired in infancy and childhood, transmission being from person to person. In Pakistan the data about the prevalence of *H. pylori* is scanty but earlier studies showed seroprevalance of 58-60% (Noor *et al*., 2008). *H. pylori* infection has been etiologically related to important gastric conditions like gastritis, peptic ulcer and gastric cancer (Kenneth & McColl, 2010). Association with other important conditions is coming up on the basis of studies these include functional dyspepsia, unexplained iron deficiency anemia and chronic ITP (Gasbarrini *et al*., 1998). The pathogenic role of *H. pylori* in peptic ulcer disease, both duodenal and gastric is very well documented now and found up to 95 % of patients with duodenal ulcers and 80 % of patients with gastric ulcers (Breuer *et al*., 1998) Eradication of the organism leads to ulcer healing and a markedly lower incidence of recurrence. The role of *H. pylori* in non ulcer dyspepsia has not yet been proved and eradication is not linked at all with improvement of symptoms in most of the patients (Blum *et al*., 1998). In order to create awareness and

to educate medical doctors regarding diagnosis and management of this infection, various and interventional and educational steps have been taken (Peterson *et al*., 2000; Hunt *et al*., 1999). This study is also attempt was conducted to figure out the existing level of knowledge and awareness among our doctors in Karachi regarding the *H. pylori* infection.

Material and Methods:

This survey was done in a period of 6 months. It was started from May 2010 and wound up by October 2010. The study was conducted in a metropolitan city-Karachi-Pakistan. The study was conducted on General physicians belonging to both government and private sector hospitals located in the mega city Karachi. In this study, 256 physicians were approached, 226 accepted to participate in the survey however; 39 did not fill up the questionnaire. Both sexes were given equal opportunity to become a part of the study. A questionnaire based upon broadly 12 queries and that was generated by taking help of medical textbooks, clinical and diagnostic microbiology and mainly from different research articles searched from the internet source. Moreover, while developing questionnaire, great care was taken as special consideration to make it very simple, straight forward, non technical and easy to understand language for all doctors. The questionnaire was also further checked by some experts and all errors were erased if pointed. The questionnaires were asked to fill very gently during visits to any hospital. First verbal informed consent was taken and if permitted so preceded ahead. All questionnaires at the end were collected and analyzed and all answers were expressed in percentages for making them conveniently read and understand by the readers in the form of graphs.

Result and Discussion:

Half of the world's population harbor *H. pylori* in their upper gastrointestinal tract (Mertz & Walsh, 1991) and therefore has become the most extensive infection in the world (Sherwani *et al*., 2013). In the current study, 256 physicians were approached and 226 participated in the survey while 39 refused to be a part of it. The survey was conducted on 68% of doctors belonged to government setup and 32% belonged to private hospitals. The result findings indicated that 70 % physicians were aware of *H. pylori* infection; while 20% were absolutely ignorant of this infection. Interestingly, 8% physicians first time heard about *H. pylori* in their professional career. As far as carcinogenesis ability of this infectious agent is concerned, 34 physicians responded that *H .pylori* can cause cancer however 52 % straight forwardly disagree and 18% had a state of doubt regarding its carcinogenic characteristics. Regarding the mode of transmission various thoughts were noticed but majority of respondents believed that water is likely responsible for its transmission. Among respondents 8% thought blood, 9% also answered food as a source of *H. pylori* transmission. Majority of physicians i.e. about 46% viewed dyspepsia is a sign for *H. pylori* clinical diagnosis; however 26% believed gastritis, 11% believed peptic ulcer, 9% believed duodenal ulcer,7% believed diarrhea could be some of the possible indications that usually draw doctors attention for clinical testing. For preference of test 54% physicians suggested for invasive test on the contrary; 29% for non-invasive test .For the sake of diagnosis 52% doctors prescribe for endoscopy, 24% for serological test, 15% stool test, 4% Urea breath test and 6% do not prescribe anything. In our study it was found that 49% got *H. pylori* knowledge via their medical text books, 21% learnt by their experience, 14% got *H. pylori* information by attending seminars, conferences and workshops, 9%from internet source and 7% through pharma informative literature. For the sake of antibiotic therapy 67% responded triple therapy, 14% responded dual therapy while 18% had a view that single antibiotic is enough to curing *H. pylori* infection. Moreover, it was found that 59% of the doctors were aware of first lien antibiotics and 33% were aware of second line of antibiotics. Regarding treatment duration about 80% of physicians suggest antibiotics for two weeks and 10% suggest more than a couple of weeks however 8% of them also believe to prescribe for about a mouth in order to totally eradicate the pathogen from the body. The success of eradication of *H. pylori* infection is not only dependent upon the treatment regimen but also upon the knowledge of primary care physicians about the organism itself, indications for its eradication, the diagnostic tests used and the practice of follow-up after eradication. There are different diagnostic tests available for the diagnosis of *H. pylori* infection which can be subgrouped into non-invasive (serology, urea breath test and stool antigen testing) and invasive (endoscopy, histopathology, culturing from tissue and PCR) method (Malfertheiner *et al.,* 2006). A recent large cohort study carried out on physicians in Pakistan has shown that 43% physicians considered serology as the investigation of choice, whereas 47% preferred serological follow-up after eradication (Ahmed *et al*., 2009). Majority of patients with dyspepsia are managed by primary care physicians and several educational initiatives have been undertaken to

educate them regarding the appropriate diagnosis and management of this infection (NIH Consensus conference, 1994: Weijnen *et al*., 2001). However, the results from several internationally published surveys from different developed countries have revealed that significant confusion still exists and discrepancies are present in the understanding of *H. pylori* among primary care physicians with respect to the pathogenesis, diagnosis and treatment (Huang *et al*., 2003). The major uncertainties are in the management of patients with dyspepsia where the primary care physicians need to make a decision whether to test for *H. pylori* infection and treat if positive, or refer patients to a specialist (Howden & Hunt, 1993: Howden, 1997).

Fig 1: In this study, among 256 physicians who were approached, 226 accepted to participate in the survey however; 39 did not become a part of it.

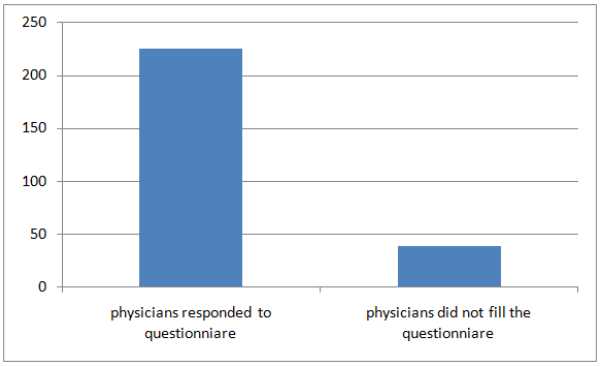


Fig 2: Percentage based data of physicians regarding awareness of H. *pylori* infections

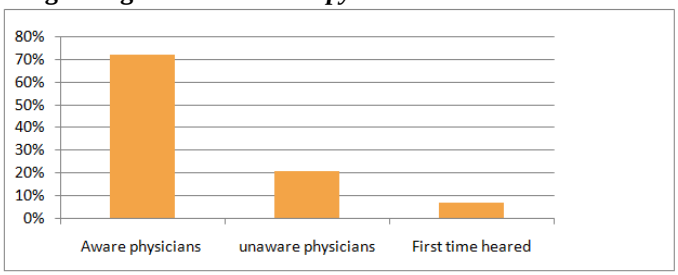


Fig 3: Percentage data of physician's awareness about the carcinogenic ability of *H. pylori*

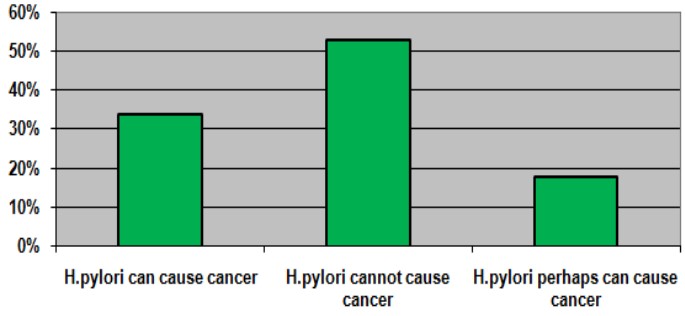


Fig 4: Percentage based data of mode of transmission of *H. pylori* infections

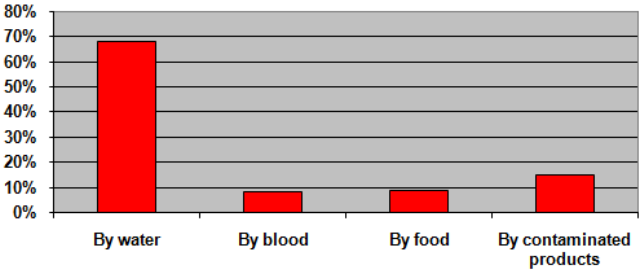


Fig 5: Percentage data of indications for testing *H. pylori infection*

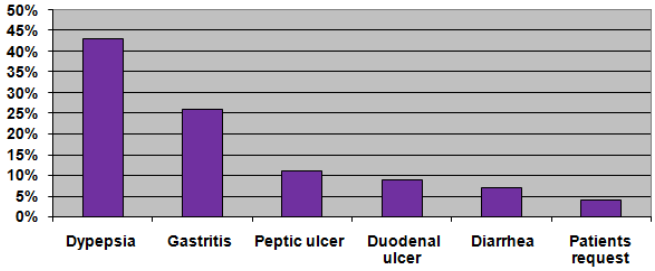


Fig 6: Percentage of preference of clinical test for detection of *H. pylori infection*

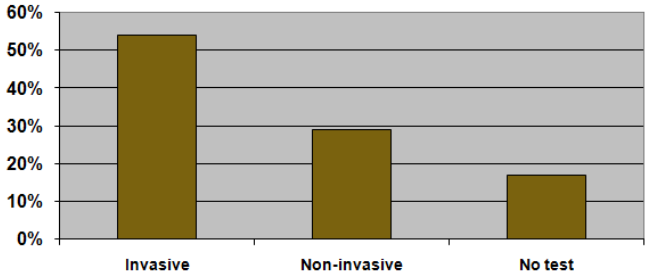


Fig 7: Percentage data of test prescription for the detection of *H. pylori infection*

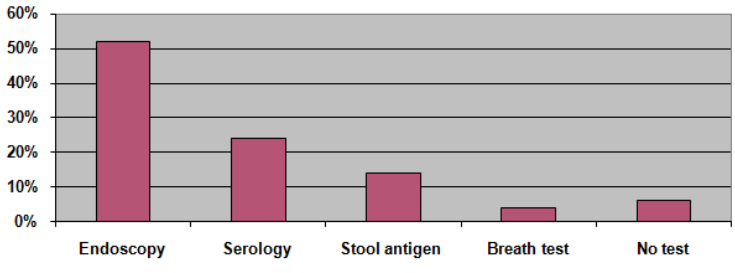


Fig 8: Percentage of source of knowledge and formations regarding *H.pylori*

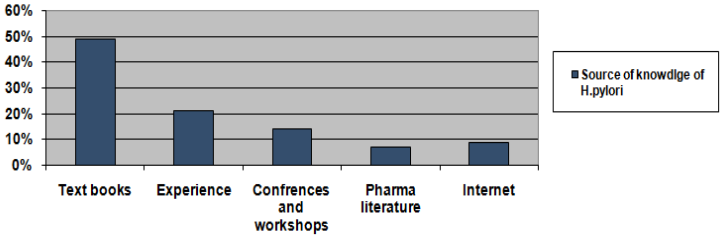


Fig 9: Percentage of antibiotics regimen suggested for the treatment of *H. pylori infection*

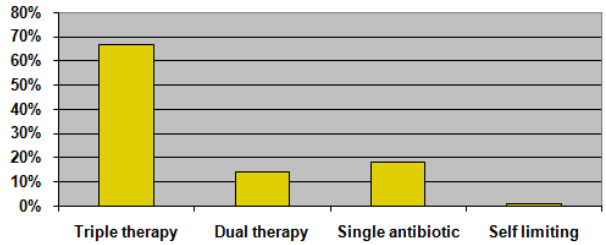
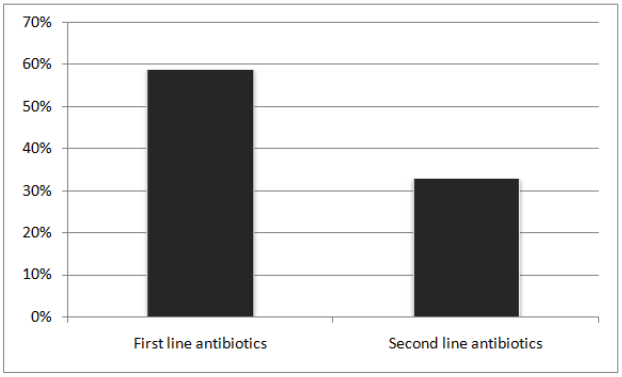
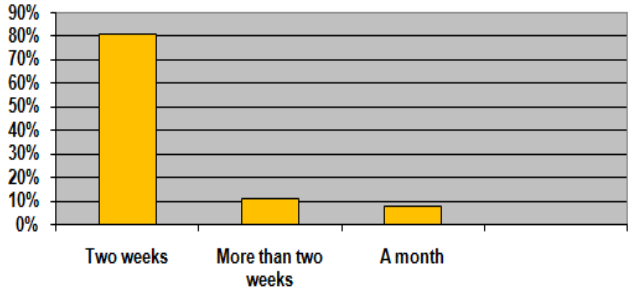


Fig 10: Percentage of treatment durations of *H. pylori* infection





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