

The Role of Helicobacter Pylori in The Causation of Laryngopharyngeal Disorder in Specialized Allergic Center /Kirkuk-Iraq

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ABSTRACT

Laryngopharyngeal reflux disease is a common manifestation of GERD, about 10% of cases presented to ENT department. Out of 56 cases tested for H.pylori ,36 were positive for serum test and 20 cases were positive for both serum and stool.75% of cases responded to treatment of GERD with no recurrence

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المخلص

مرض استرجاع الحنجروبلعومي يعتبر من الاعراض الشائعة والمصاحبة لمرض استرجاع المريء حيث ان 10% من الحالات يتم مراجعتهم لاختصاص الانف والاذن والحجرة .من مجموع 56 حالة تم فحصهم واشراكهم في الدراسة ,اظهرت نتائج الفحوصات ان 36 من المصابين كانت نتيجة فحص المصل لديهم موجبة بينما اظهرت نتائج الفحوصات 20 حالة من المرضى كانت لديهم فحوصات الخروج والمصل موجبة للبكتريا الحلزونية

1. Introduction

Laryngopharyngeal reflux (LPR) is one of the common manifestation of GERD (Gastroesophageal Reflux Disease),although it is an extraesophageal system ,but up to 10% of cases present to ENT specialist and diagnosed their. [1]

The presumptive pathophysiology for the direct mechanism for(LPR)is the retrograde reflux of gastric content (Acid and pepsin) into the laryngopharynx causing inflammation and irritation for the

sensitive mediated irritation for the esophagus leading to reflux and causing the occurrence of symptoms.[2]

In a systemic review and meta – analysis on the rate of H.pylori in laryngophangeal reflux, it was shown that the overall prevalence rate of H.pylori infection was 43.9 %,that was determined by of 13 publications [3]

An interesting feature of this condition is that fewer episodes of reflux are needed to injury laryngeal mucosa than that compared to mucosa of the esophagus.[4]]

The pattern of LPR is different than gastroesophageal reflux it occurs usually at daytime in up right position in contrast gastroesophageal reflux that occurs at night time during lying down.

H.pylori may be found in many sites in upper respiratory tract including laryngeal mucosa and intrarefinoid region ,as the mechanism indicates that when gastric contents pass the upper esophageal sphincter ,it causes hoarseness of voice ,Globus ,cough, massive throat mucous.[5]

The identification of H.pylori was first proved by marshal and warren ,it was named campylobacter like organism.

The organism is a spiral shaped gram negative bacteria with four to six flagella ;it has the characteristic of obligate microaerophoilic properties and exert urease ,catalase and oxidase positive and it has the ability to protect it self by motility and the ability to convert urea to ammonium by urease and the formation of miliea around itself.[6]

Objective:

The specific objective of the current study is to investigate the potential role of H.pylori as a cause of laryngopharyngeal disorder.

2.Methodology

(1).setting and duration :-

The study was carried on in the specialized center for allergic diseases, Kirkuk, for the period from the first of January 2018 to the end of 31th December 2018.

(2). Study design :- an analytical cross-sectional study design was performed for the current study.

(3). Sample prosperities :-

A convenient sample of all attendants to the center referred for refractory laryngopharyngeal condition.

The study variables were age , gender ,with the clinical diagnosis of laryngitis ,following referral from the primary health care center and secondary health services [hospital],specialized government clinics and private clinics in Kirkuk.

The total sample size was 56 patients ,fully investigated by otologists prior to referral as refractory allergic cases.

Their age range was from 15-60 \geq years with an interval of 15 years between each group.

Equipment and procedure.

Detection of H.pylori I serum was carried on using a sandwich latent flow chromatographic immunoassay for the quantitative detection of IgG,IgM and IgA antibodies using CTK biotech ,inc .san diego ,USA.

While that of the stool was carried out to detect H.pylori Ag using the onsite H.pylori Ag rapid test CTK biotech ,inc ,san diego ,USA.

3.Results and Calculations

Out of 56 referred cases from all health sector as refractory allergic condition for further evaluation and expect diagnosis with hyper responsive symptoms ,20 cases were proved to be positive by both methods [stool and serum]tests ;while 36 were positive by serum test , with a male to female ratio 1: 1 as demonstrated.in table-1-

Table -1- shows H.pylori test result In serum according to age .

age group	Test	result	Total
	+ve	-ve	
16-30	10	15	25
31-45	6	12	18

46-60	4	7	11
60≥	0	2	2
Total	20	36	56

Table -2- shows the percentage of positive cases according to age group as the highest number was among age group 15-30years ,and the lowest among age group 60≥.

Table -2* shows the distribution of cases according to gender .

age	male		female		total
	+ve	-ve	+ve	-ve	
15-30	3	4	7	11	25
31-45	0	3	6	9	18
46-60	1	5	3	2	11
60≥	0	0	1	1	2
Total	4	12	17	23	56

Table -3- shows the results of H.pylori Ag in stool, which was higher among female [5] than male [3] with the predominant age group 15-30 years.

Table -3- illustrates the percentage of H.pylori Ag in stool among studied sample .

H.pylori result Ag					
age group	+ve		-ve		Total
	M	F	M	F	
15-30	1	5	3	2	11
31-45	1	0	2	2	5
56-60	1	0	2	1	4
60≥	0	0	0	0	0
Total	3	5	7	5	20

While table -4- shows the response to treatment with anti H.pylori ,therapy following stool test and clinical improvement.as 75% of the cases had full response to treatment with disappearance of their symptoms.

Table -4- shows the response to treatment with anti h.pylori therapy.

Age group	Response to treatment				
	total	M	F	+ve	%

				response	
15-30	10	3	7	7	70%
36-45	6	0	6	5	85%
46-60	4	1	3	3	75%
60≥	0	0	0	0	0%
total	20	4	16	15	75%

4. Conclusion

From the current study its concluded that cases with chronic laryngopharyngitis need to be tested for H.pylori.

5. Discussion

Infection by H.pylori is a common world wide problem .It counts for 30-40% in development countries and 80-90 % in developing ones.

Many studies suggest that h.pylori in the gastric fluid enters the nasopharyngeal reflux disease (GERD)and it my colonize the dental plaque ,adenoid tissue and tonsils ,from their it may ascend to middle ear and Para nasal sinuses either directly or by reflux from these locations triggering various pathological problems in the ear ,nose and throat.^[7]

It is well known that H. pylori is the sole gastric bacteria for the time being ,while its DNA has been detected in extra gastric locations such as cavities and in Para nasal sinuses.^[8]

In study done by deveney et al , It was demonstrated that 43% of GERD patient with positive H.pylori t had laryngeal or pharyngeal mucosal changes.^[9]

A previous study which was carried out in Egypt by youssef and ahmed ,it was shown that 57% of cases with chronic laryngitis infection were positive using HPSA [helicobacter pylori stool antigen]^[10]

It was shown the incidence of H.pylori among LPRD patient was 64% patient , and it has been mentioned that HPSA has very reliable result showing a high sensitivity and specificity also in evaluating the response to treatmen and eradication of infection.^[11]

Borkowoski etal showed a strong relation between eradication of H.pylori infection and clinical improvement in patient having comorbidities with H.pylori and chronic laryngitis.^[12]

in a study done to determine the effect of medical treatment ,it has been shown that in management of chronic pharyngitis ,antibiotics that are effective in eradication of H.pylori can be used to decrease the symptoms of pharyngitis,^[13]

In managing chronic laryngitis drug therapy consists of acid suppression with proton pump inhibitor [PPIs],as it assists diagnosis ,it is proved that 70% response rate will be detected.^[14]

In a study conducted by burduk pk et al ,it was proved that H.pylori was identified in almost 50 percent of the patients complaining from benign laryngeal disease.^[15]

In a study carried out by abdellah RA et al, it was shown that there were (55,2 %) of patient suffering from chronic laryngitis had GERD .^[16]

6.References

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