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PREVALANCE OF HELICOBACTER INDUCED PEPTIC ULCER IN CIRRHOTIC PATIENTS

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Abstract:
Objective: *Infection caused by the Helicobacter pylori increases the danger of ulcer of mucus membrane in the patients suffering of liver disease. The part played by Helicobacter pylori in the initiating of ulcer in the patients of chronic liver disease is still contentious. The main aim is study is to know that if Helicobacter pylori play any role the patients suffering of chronic liver disease.*
Methodology: *In this research work, 60 patients of chronic liver disease were selected. Endoscopy was used to discover the peptic ulcer in those patients of chronic liver disease. Serum of these participants was checked for H. pylori antibodies with the help of a special commercial kit ELISA. T student & fisher test was utilized for statistical investigation.*
Results: *Peptic ulcer was discovered in active condition in only 9 patients of chronic liver disease. Among them, eight patients were found positive for H. pylori antibodies. The percentage of these patients was more than eighty-eight percent. From the remaining fifty-one patients, thirty-one patients were found positive for H. pylori antibodies. The percentage of these patients was about sixty-one percent.*
Conclusion: *Infection caused by H. pylori in the patients suffering of chronic liver disease with ulcer of mucus membrane are showing the similar arrangement as explained by the patients of chronic liver disease without ulcer of that particular kind. So, it was assumed that the cause of this disease of peptic ulcer in patients of cirrhotic disease could be linked to infection of H. pylori. But this result was not factually confirmed by this research work.*
Key Words: *Helicobacter pylori, Peptic ulcer, chronic disease, liver, ELISA, antibodies.*

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INTRODUCTION:

H. pylori are recognized as one of the main causes of chronic liver disease and disease of peptic ulcer [1]. The suppression of gastric infection caused by Helicobacter pylori has decreased the occurrence of the peptic ulcer in the patients [2-8]. The treatment of infection caused by Helicobacter pylori has decreased the danger of re-emerging BPU (bleeding peptic ulcer) in the patients [3]. The aspects which are the cause of creating the ulcers and the reasons of high occurrence of these ulcers in the patients of chronic liver diseases are not identifiable. The abnormalities of gastric mucosa are found in the patients suffering of chronic liver diseases. Peptic abrasions found in the gastro-duodenal mucosa are found very common in the patients of chronic liver diseases as compared to their healthy controls [4].

A past research report shows that infection caused by Helicobacter pylori has increased the danger of the patients suffering of chronic liver diseases (cirrhotic patients) by 2.7 fold but the current research work is not able to prove the findings of that study [5]. Some research works have concluded that there is complete disparity between the HPD (hepatic pressure gradient) in the patients found with gastric ulcers and the patients found without gastric ulcers [6]. The role played by the Helicobacter pylori in the development of the peptic ulcers in the cirrhotic patients is still contentious [7]. This research work was carried out to know that the patients suffering of chronic liver disease has any connection with Helicobacter pylori.

METHODOLOGY:

There were 60 patients of chronic liver disease were chosen for this research work. This research was completed in the duration of two years from July 2016 to March 2018 in Nishtar Hospital Multan. The discovery of the cirrhosis in the participants was carried out by medical tests, sonogram of the abdomen cavity was carried out, endoscopy methods were used and tissues of liver were also taken to detect the presence of this chronic liver disease. In the start of this research work, a question answer session was completed with the participants. The serum of the patients was collected for analysis and store in a temperature of minus seventy degrees centigrade until it would be analysed. The cause of this chronic liver disease was identified as viral when antibodies to HCV (hepatitis C virus) were available. Some least common diseases as Wilson disease, cirrhosis due to alcohol, RBC (primary biliary cirrhosis), and cancer were also identified.

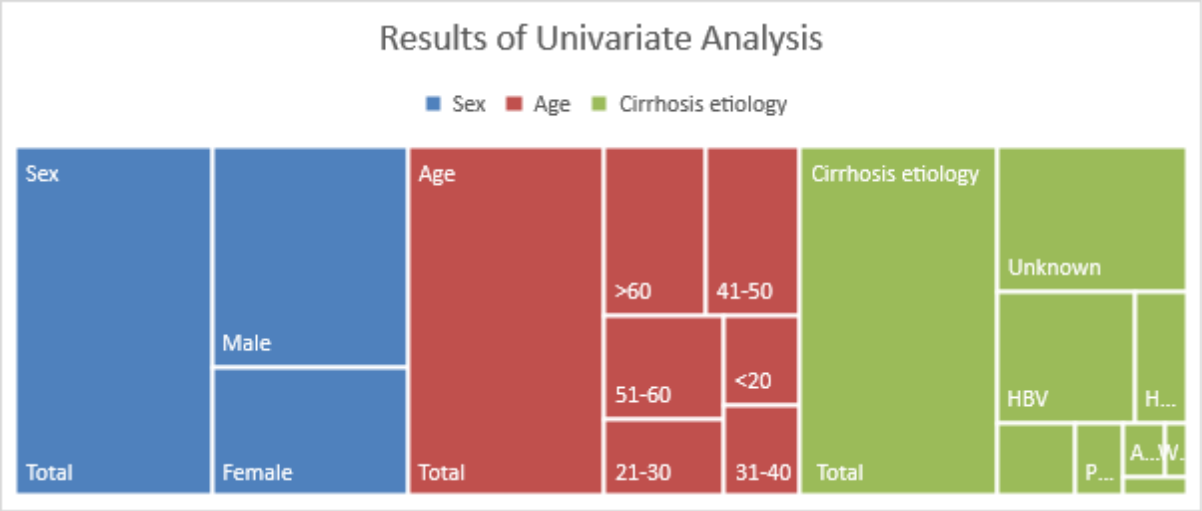
Current medical investigations show that cancer identified in the patients was the main cause aspect of the chronic liver disease in the patients. At the last, some participants of this research work were identified as non-familiar cause of this chronic liver disease. ELISA kit was used for the identification of the antibodies of H. pylori in the patients suffering of chronic liver disease. The sensitivity and specificity of this kit for the detection of infection caused by H. pylori are reported to be more than ninety-eight percent. If the values on the ELISA kit display are found lower, then fifteen will be considered as negative and if the values on the ELISA kit are more than fifteen then it will be considered over positive.

Statistical Analysis: Students T test and Chi square test were used for the statistical analyses of the data gathered in this research work. The outcomes of these tests was thought be important if the P value was greater than 0.05.

RESULTS:

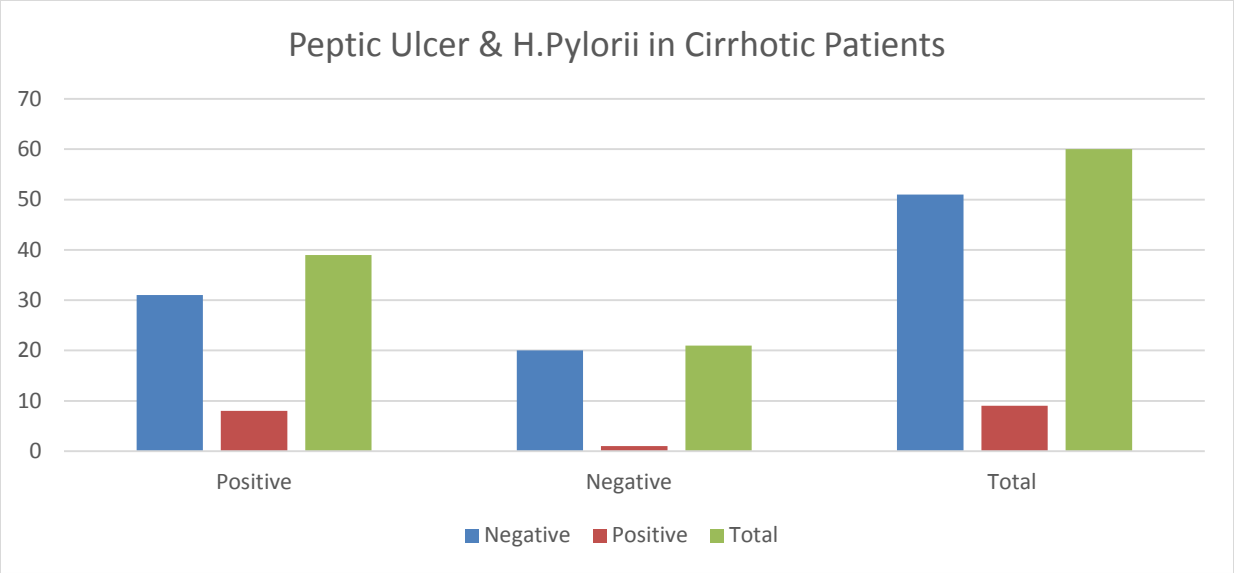
Sixty patients suffering of chronic liver disease who visited the GI (gastrointestinal) medical clinic in 20 months' duration of this research work were included in this study. Thirty-eight patients were the male participants of this research work and twenty-two were thee female participants the average age of the patients was 47.22+-17.12 years from fifteen years to seventy years. Table-1 describes the gender, age and cause of this disease in the patients.

Table-I: Results of the univariate analysis			
Analysis		Number	%
Sex	Male	38	63.3
	Female	22	36.7
	Total	60	100
Age	<20	6	10
	21-30	8	13.4
	31-40	6	10
	41-50	14	23.3
	51-60	11	18.3
	>60	15	25
	Total	60	100
Cirrhosis etiology	Alcoholic	2	3.3
	HCV	6	10
	HBV	16	26.7
	Primary billiary cirrhosis	3	5
	Wilson	1	1.7
	Cancer	5	8.3
	Autoimmune	1	1.7
	Unknown	24	40
	Total	60	100



Peptic ulcer was discovered in active condition in only nine patients of chronic liver disease with the help of endoscopy. The model of that endoscopy was GFI-XQ230. Out of these nine detected patients, eight patients were found positive for antibodies of H. pylori. In the next remaining fifty-one patients, 31 patients were found positive for the antibodies of H. pylori as described in Table-2.

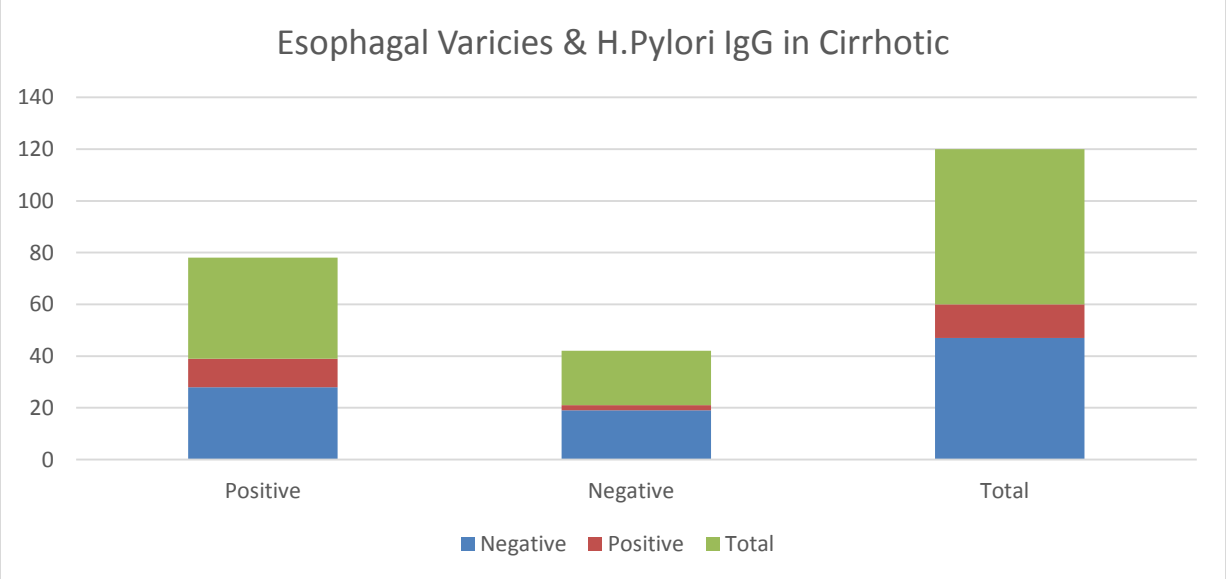
Table-II: Peptic ulcer and H. pylori IgG in cirrhotic patients				
Peptic ulcer IgG	Negative	Positive	Total	
Positive	31(60.8%)	8(88.9%)	39(100%)	
Negative	20(39.2%)	1(11.1%)	21(100%)	X =3.105
Total	51(100%)	9(100%)	60(100%)	P=0.078



Peptic ulcer was discovered in various areas as fundus, anterum and duodenal area. Varices in the oesophagus were discovered in thirteen patients with the help of endoscopy. Eleven patients were found positive for the antibodies of H. pylori out of those thirteen patients who were found with varices in the oesophagus. Twenty-eight patients of chronic liver disease were found positive for the antibodies of H. pylori out of remaining forty-seven patients as described in Table-3.

Table-III: Esophageal varicies and H.pylori IgG in cirrhotic patients

Esophageal varicies IgG	Negative	Positive	Total	
Positive	28(59.6%)	11(84.6%)	39(100%)	
Negative	19(40.4%)	2(15.4%)	21(100%)	X =3.109
Total	47(100%)	13(100%)	60(100%)	P=0.078



DISCUSSION:

Several factors are available which can cause the creation of peptic ulcer. The level of acidity and gastric mucosal response modulators are in requirement of interrogation to prove its link with the cause of initiating this disease in the patients of chronic liver disease [5]. The most vital cause of this disease of peptic ulcer is infection caused by Helicobacter pylori. The causes and reasons of chronic liver disease were not linked with the occurrence of infection caused by H.pylori. We can say that the infection caused by H. pylori was not had any relation with gender, age and cause of this chronic liver disease (cirrhosis). Peptic ulcer is the main abnormality faced by the patients of chronic liver disease and the danger of occurrence of peptic ulcer is very high in those patients [7].

The surveys carried out with the help of endoscopy have shown that the occurrence of peptic ulcer is more than four percent in the patients suffering of chronic liver disease cirrhosis which is twenty to forty-seven percent than found in the normal public [7]. It is also proved that the patients of chronic liver disease are also the victims of some other abnormalities of gastric mucosa which is clearly evaluated in the patients of cirrhosis than in their healthy controls.

The infection caused by H. pylori is also a vital risk factor in the initiating of this disease of peptic ulcer [9]. But diminishing of these bacteria is not able to protect patients of liver disease from the re activation of the ulcers [10]. The occurrence of peptic ulcer concluded in this research work is fifteen percent which is much high than the previous research works. The results of this research works show that infection caused by H. pylori was an autonomous factor linked with the chronic liver disease and peptic ulcer. The disparity in the occurrence of infection caused by H. pylori between chronic liver disease cirrhosis patients found with peptic ulcer & without peptic ulcer was not able to touch the level of statistical significance which was P=0.078. Varicies in the oesophagus and variceal bleeding are causing a lot number of deaths in the patients of cirrhosis. This problem has connections with other abnormalities as malnutrition, encephalopathy & bleeding in the varicies [11, 12].

There was some connection between the varicies of oesophagus and infection caused by H. pylori. But this outcome of this research work was also not able to reach the statistical significance which is P=0.078.

CONCLUSION:

The infections caused by the H. pylori in the patients of chronic liver disease with the presence of peptic ulcer provide the similar pattern as mentioned by the patients of chronic liver disease without the presence of peptic ulcer. This is supposition that the cause of this disease of peptic ulcer in the patients of chronic liver disease could have any connection with the infections caused by H. pylori but this supposition was authenticated by this research work. A large number of research works are required to reach at a definite result.

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