



A STUDY ON ASSOCIATION OF CHRONIC LIVER DISEASE AND PEPTIC ULCER DISEASE

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ABSTRACT Peptic ulcer is disease caused by various factors including H.pylorii and NSAID. The prevalence of Peptic ulcer disease is not well studied. This study is Aimed at the association and prevalence of peptic ulcer disease in the setting of chronic liver disease. **Materials and Methods:** This Cross Sectional Study was done at Coimbatore Medical College Hospital fromm October 2012 to November 2013. The study group included patient with Decompensated Liver Disease defined by Child Pugh Score B and C. Age 15 – 75 years of age Non Alcohol consumers Patients confirmed to have decompensated liver disease by clinical, laboratorial and imaging methods. Child Pugh Score B and C. The patients with this state was admitted and treated, their PT / INR corrected and then subjected to Oesophago Gastro Duodenoscopy The Study included 50 study subjects who were suffering from Decompensated Liver Disease. They were selected on the basis of the Inclusion and Exclusion criteria. **Results:** The majority of Individuals were in the age group of 50 – 60 years & 40 – 50 years. 30 % of individuals in the study group were suffering from HBV related liver disease while 6 % of individuals suffered from. In the analysis of results under. **Conclusion:** The study showed that the prevalence of peptic ulcer disease is quite high in patients with decompensated liver disease (40 %) which was quite higher than in other populations. We also found H pylori prevalence in DCLD patients in proportion to other populations (44 %). The study showed a relation between the severity of liver disease as evidenced by the Child Pugh Score and the Peptic ulcer disease

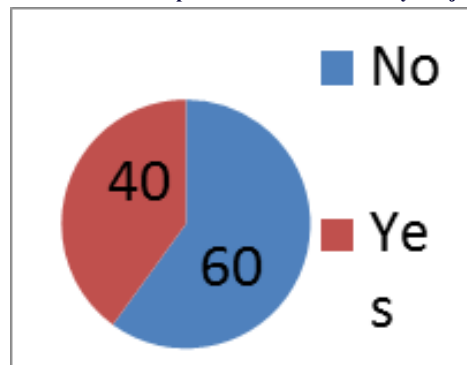
KEYWORDS : Chronic Liver disease . Peptic ulcer disease

Back ground:

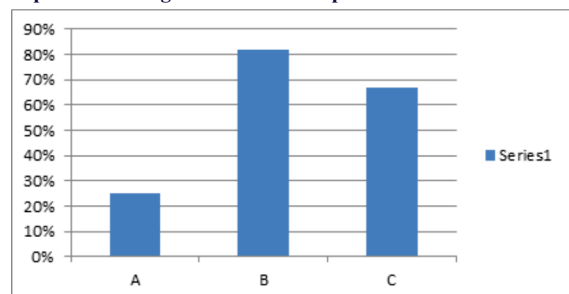
A higher prevalence of H pylori infection seen in patients with chronic liver disease than controls subjects of similar age and sex. Additional investigational studies, should be under taken, in order to evaluate the association is causal or otherwise. This is not clear whether the association has a definite pathological significance as the available data revealed that there was no relation between H pylori infection and the stage of chronic liver disease. It is interesting to not that the patients having H.pylorii infection have higher blood concentrations of ammonia and that eradication of the organism results in a significant reduction in ammonia levels. H pylori urease activity in the lumen of the upper Gi tract of cirrhotic patients has been pointed out to represent a significant production of ammonia leading on to several studies Relation Between Helicobacter Pylori Infection development of hepatic encephalopathy. In addition the development of peptic ulcer in Chronic liver disease can lead on the catastrophic bleed in the background of impaired clotting factors synthesis by the liver. hence we undertook this study to throw more light on the association of peptic ulcer and chornic liver disease. Aim: To study prevalence of peptic ulcer disease is quite high in patients with decompensated liver disease **Materials and Methods:** This Cross Sectional Study was done at Coimbatore Medical College Hospital fromm October 2012 to November 2013. The study group included patient with Decompensated Liver Disease defined by Child Pugh Score B and C. A formal consent form was taken from all patients explaining the procedure and possible complications. **INCLUSION CRITERIA:** Age 15 – 75 years of age Non Alcohol consumers Patients confirmed to have decompensated liver disease by clinical, laboratorial and imaging methods. Child Pugh Score B and C. **EXCLUSION CRITERIA:** Patients below and above the specified age limits. Alcohol consumers Patients with Child Pugh Score A Pregnant women. Patients on chronic use of NSAID The patients with this state was admitted and treated, their PT / INR corrected and then subjected to Oesophago Gastro Duodenoscopy. The biopsy specimen was subjected to Rapid Urease test. **Rapid Urease Test:** The Rapid Urease test is carried out with a Rapid Urease kit. The kit is undone and the biopsy specimen placed in the trough and one drop of distilled water added and resealed. The test is read as positive (turns pink) or negative within 24 hours. The patients were selected on the basis of the Child Pugh Score. The Child-Pugh classification has been used to assess the risk of non-shunt operations in patients with cirrhosis. It is a modification of the Child-Turcotte classification. The variables include the serum albumin and bilirubin, ascites, encephalopathy and prothrombin time. The score ranges from 5 to 15. Patients with a score of 5 or 6 have Child-Pugh class A cirrhosis (well-compensated cirrhosis), those with a score of 7 to 9 have Child-Pugh class B cirrhosis (significant functional

compromise), and those with a score of 10 to 15 have Child-Pugh class C cirrhosis (decompensated cirrhosis). All patients who underwent OGD scopy and Biopsy were closely observed for bleeding in the form of hematemesis or Hypotension

Graph 1 Distribution of Peptic Ulcer Disease in Study Subjects



Graph 2: Child Pugh Score and the Peptic ulcer disease



Results:

The Study included 50 study subjects who were suffering from Decompensated Liver Disease. They were selected on the basis of the Inclusion and Exclusion criteria. They were all Non Alcoholics for the nullification of the confounding factor. The majority of Individuals were in the age group of 50 – 60 years & 40 – 50 years. 30 % of individuals in the study group were suffering from HBV related liver disease while 6 % of individuals suffered from. The cross sectional study which spanned over 13 months and included 50 study subjects of Coimbatore Medical College Hospital having DCLD and who were

not consumers of alcohol had varied results to give. In the analysis of results under Descriptive statistics we saw that the number of patients with Hepatitis B (30 %) related DCLD were relative high and also Hepatitis C(8%) related DCLD. A number of patients also suffered DCLD due to unknown causes due to unwillingness for further evaluation and financial constraints.No significant association was found between the age of the patient and peptic ulcer disease though most of the cases clustered in the 50 - 60 age group. All studies show that peptic ulcer disease is common in all age groups except in children.

Discussion: significant association was found between the Child Pugh Score and the Peptic ulcer disease. A p value of < 0.05 was obtained.The study also showed no significant association between gender and peptic ulcer disease. Both males and females had comparable values. A higher percentage was expected in males due to the smoking factor and the higher gastric acid output adjusted for age and weight. But it was observed, though not studied that a huge percentage of individuals who do not drink alcohol do not smoke too especially in the Coimbatore population.Also there was no specific association between the etiology of DCLD and the peptic ulcer disease..There was a definite association between the peptic ulcer disease and H pylori positivity. The study shows evidence that Rapid Urease test can be used as a credible test for detection of H pylori. The documented sensitivity and specificity are (89 to 98 percent and 89 to 93 percent) respectively as per studiesThe study showed a relation between the severity of liver disease as evidenced by the Child Pugh Score and the Peptic ulcer disease. The p value was less than 0.05. In Stage B and Stage C the disease was found much frequently than in Stage A. All patients who were admitted belonged to the Stage B and C. They were treated and brought down to Stage A or B. The results were consistent with the findings of Patarapong et al whose results are shown below. The percentage of DCLD patients with Peptic ulcer disease in the form of either gastric ulcer or duodenal ulcer or erosions were found to be 40 %.. Another study by M S Khuroo et al showed a point prevalence of 4.72 %. Another study by Dutta et al in Vellore, Tamil Nadu showed a prevalence of 2.7% and 2.9% for gastric and duodenal ulcer respectively. This shows evidence that the prevalence of Peptic Ulcer disease in DCLD patients is significantly higher than in the general population implying the need for prophylactic anti secretory and anti H pylori regimens in all DCLD patients.The prevalence of H pylori in DCLD patients according to our study was found to be 44%. Sathar et al shows a prevalence of 35.71 in the Thiruvananthapuram population with DCLD.Sandulache et al in Romania found the prevalence to be 51.61%. In Taiwan Wu et al found it to be 75 %.

CONCLUSION: The study which lasted thirteen months had results which could give evidence for change in therapy of patients with DCLD and also provided scope for further investigation and research. The study showed that the prevalence of peptic ulcer disease is quite high in patients with decompensated liver disease (40 %) which was quite higher than in other populations. We also found H pylori prevalence in DCLD patients in proportion to other populations (44 %). The study showed a relation between the severity of liver disease as evidenced by the Child Pugh Score and the Peptic ulcer disease. Meaning higher the severity of DCLD higher the severity of peptic ulceration. No significant association was found between age, gender, etiology of DCLD with Peptic ulcer disease. There was positive correlation between Rapid Urease Test positivity and Peptic ulceration under lining the role of H pylori.These findings of high prevalence of peptic ulcer disease and H.pylori in the DCLD patients direct us to start prompt therapy for Peptic Ulcer disease and against H pylori in the first visit itself. As the H pylori incidence has seen to be increasing with the severity of Child Pugh Score all patients with DCLD (B and C) should have anti secretory and anti H pylori measures in their treatment regimen.A follow up study including a larger population is needed and is underway to assess the progression of disease and the prognosis once the H pylori is eliminated from the gut.The study will also look into the benefits of early therapy against H pylori and its effect on long term outcome.

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