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Research Article

Hypersplenism In liver Cirrhosis, 100 Cases

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ABSTRACT;

Objective: To determine the frequency of Hypersplenism in liver cirrhosis.

Methodology: This was a cross sectional study done at Services Hospital, Lahore during July to December 2017. The 100 cases of liver cirrhosis irrespective of gender and falling in the age group of more than 18 years were included. The diagnosis of liver cirrhosis was made according to clinical signs and symptoms and shrunken liver size less than 12 cm on USG abdomen with or without portal vein dilatation. These cases underwent detailed examination and liver function tests to label child pugh class and the duration of cirrhosis was also collected. Lympho proliferative disorders and those taking drugs causing bone marrow were excluded. Hypersplenism was labelled as yes or no by examination of bone marrow with normal or hyper cellular marrow.

Results: There were 100 cases of cirrhosis in the present study with mean age 58.12±10.34 years. There were 62 (62%) males and 38 (38%) females and there were 61 (61%) in child pugh class C and 39 (39%) in class C. Out of 100 cases Hypersplenism was seen in 30 (30%) of the cases. This was significantly higher in number that had cirrhosis more than 5 years where it was seen in 21 (35.59%) of cases with p= 005. Hypersplenism was also significantly high in cases with Child class C where it was found in 24 (29.34%) cases with p values of 0.01

Conclusion: Hypersplenismis seen in every 3rd case of cirrhosis and it is significantly high in cases of cirrhosis more than 5 years and child pugh class C.

Key Words: Hypersplenism, Cirrhosis, Child pugh class

INTRODUCTION:

Hepatitis B and C are the most common causes of liver disease and has the capability to convert into chronic liver disease which is denoted as ongoing inflammation and liver damage. This damage leads to inflammation and ultimate scarring labelled as Liver cirrhosis. It is one of the highly morbid disease and approaching the top 10 causes of death in United states.[1] Liver cirrhosis can lead to various structural and functional abnormalities that can add further to over all morbidity. These included portal hypertension, variceal bleeding, ascites, porto systemic encephalopathy, hypersplenism etc.[2-3] Pancytopenia is one of the common complications seen in such cases and there is complex underlying pathophysiology. Hypersplenismis usually associated with enlarged spleen size. There is increased $CD4^+$:$CD8^+$ ratio of lymphocytes in cases of cirrhosis as compared to control.It is a controllable complication that can be done by splenectomy to avoid further deterioration in the clinical scenario.[5-6]

OBJECTIVE: To determine the frequency of Hypersplenism in liver cirrhosis.

MATERIAL & METHODS:

Study design; Cross sectional study

Study Setting; Medical departments, Services Hospital, Lahore

Duration; July 2017 to December 2017

Sampling technique; Non probability consecutive sampling

The 100 cases of liver cirrhosis irrespective of gender and falling in the age group of more than 18 years were included. The diagnosis of liver cirrhosis was made according to clinical signs and symptoms and shrunken liver size less than 12 cm on USG abdomen with or without portal vein dilatation. These cases underwent detailed examination and liver function tests to label child pugh class and the duration of cirrhosis was also collected.Lymphoproliferative disorders and those taking drugs causing bone marrow were excluded. Hypersplenism was labelled as yes or no by examination ofbone marrow with normal orhyper cellular marrow.

Statistical analysis;

The data as assessed by using SPSS version 22.0.The confounding variables were stratified and chi square test was applied taking p value < 0.05 as significant.

RESULTS;

There were 100 cases of cirrhosis in the present study with mean age 58.12±10.34 years. There were 62 (62%) males and 38 (38%) females and there were 61 (61%) in child pugh class C and 39 (39%) in class C. Out of 100 cases Hypersplenism was seen in 30 (30%) of the cases as in figure 01.This was significantly higher in number that had cirrhosis more than 5 years where it was seen in 21 (35.59%) of cases with p= 005 as in table 1. Hypersplenism was also significantly high in cases with Child class C where it was found in 24 (29.34%) cases with p values of 0.01 as shown in table 2.

Figure No. 1. Hypersplenism

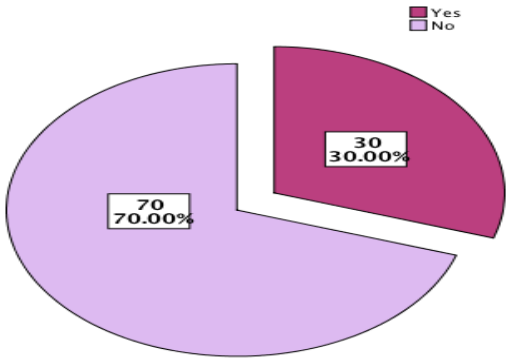

Table No. 1. Hypersplenismwith respect to duration of liver cirrhosis

Duration of cirrhosis	Hypersplenism		Total	p value
	Yes	No		
< 5 years	9 (21.95%)	32 (78.05%)	41 (100%)	0.05
> 5 years	21 (35.59%)	38 (64.41%)	59 (100%)	
Total	**30 (30%)**	**70 (70%)**	**100 (100%)**	

Table No 2. Hypersplenismwith respect to child pugh class

Child pugh classes	Hypersplenism		Total	p value
	Yes	No		
B	6 (15.38%)	33(84.62%)	39 (100%)	
C	24 (39.34%)	37 (60.66%)	61 (100%)	0.01
Total	**30 (30%)**	**70 (70%)**	**100 (100%)**	

DISCUSSION;

Liver cirrhosis is increasing day by day due to increase in the rising number of alcoholism and chronic hepatitis B and C infections not only in developingcountries but also in the developed one. It is a highly symptomatic disease when developed and can lead to various complications and hypersplenism is one of them. Out of 100 cases of liver cirrhosis hypersplenism was seen in 30 (30%) of the cases in the present study. The findings of th present study revealed a slight lower percentage as compared to the previous studies where in majority of the cases this finding was seen in more than 50% of the cases; however the data has shown as low as 11% of the cases.Suthat et al conducted a similar study and they found that hypersplenism was seen in 64% of the cases.Slightly lower results wwere seen in another study where this complication was observed in 53% cases. The reason of lower percentage in the present study as compared to the others can be explained by the difference in the inclusion criteria and operational defiiotns.[7-8]

Hypersplenism was significantly high in cases that had duration of cirrhosis more than 5 years (p=0.05) and those with child pugh class C with p= 0.01. These results were similar to the findings by Ashra et al and Guralnik et al.[8-9] The other studies also found it more in child pugh class C but the difference was not statistically significant.[10-11]The reason can be explained by the factor that longer the duration of cirrhosis and higher is the severity of the disease, which was reflected in the form of child pugh classification and hence the chances of the complications like hypersplenism were more.

CONCLUSION;

Hypersplenismis seen in every 3rd case of cirrhosis and it is significantly high in cases of cirrhosis more than 5 years and child pugh class C.

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