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RESEARCH ARTICLE

AN ANALYSIS OF RISK FACTORS ASSOCIATED WITH LIVER ABSCESS

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Abstract

Introduction: Liver abscess is a common clinical entity and a significant health concern frequently encountered in the daily emergency admissions in Indian hospitals. Despite the introduction of minimally invasive techniques in its management, liver abscesses still contribute to the significant morbidity in the affected patients. We performed this study to analyze the role of various risk factors contributing to the development of liver abscess in the present world.

Materials and Methods: The study was a hospital based descriptive, Cohort study performed in Government Medical College Jammu. All patients with ultrasonography or Computed tomography documented liver abscess presenting to the out patient department of Govt. Medical College Jammu were included in the study. The patients were admitted and were evaluated for the presence of various risk factors related to the disease with a particular focus on Alcohol intake, Diabetes, Age, Intravenous drug abuse and smoking.

Results Observations: In a total of 100 patients included in our study, 93 were males and 7 were females. 75 out of 100 patients with liver abscess were alcoholic and all were males in our study. While 54 patients in our study were diabetic we noticed that about 29 patients had poorly controlled diabetes with HbA1c > 7 and 17 had HbA1c between 6-7. Only one patient had HbA1c <6 in our study but he was a chronic Alcoholic. 47 patients in our study were Alcoholic with diabetes and most of these patients had HbA1c values between 6-8. 61.7% of such patients had HbA1c between 7-8 while as 36.2% had values between 6-7. 6 patients in our study had history of IV drug abuse and all were alcoholic also. 9 patients in our study who presented with more toxic symptoms had viral hepatitis.

Conclusion: we concluded that though diabetes with poorly controlled blood sugar is a significant risk factor for the development of liver abscess. The significant burden of the disease in the community is due to synergistic effect of alcoholism and diabetes in individuals. We suggest that all alcoholic patients with diabetes should have a strict regulation of their blood sugar done with 4 monthly HbA1c levels not allowed shoot beyond 6 U/dl.

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Introduction:-

Liver abscess is a common clinical entity and a significant health concern frequently encountered in the daily emergency admissions in Indian hospitals. Despite the introduction of minimally invasive techniques in its management, liver abscesses still contribute to the significant morbidity in the affected patients. [1] While the aetiology remains unexplained in the majority of patients, common causes include ascending biliary infections, portal venous spread from appendicitis, diverticulitis etc, hematogenous spread and direct inoculation from trauma. There has been an increased incidence in alcoholics, diabetics, elderly and immunocompromised [2,3] Also with the emergence of new public health concerns like IV drug abuse, Hepatotropic viral epidemics, Increased prevalence of diabetes, incidence of liver abscesses also seems to be on rise. We performed this study to analyse the role of various risk factors contributing to the development of liver abscess in the present world.

Study design:

The study was a hospital based descriptive, Cohort study performed in Government Medical College Jammu. All patients with USG or CT documented liver abscess presenting to the OPD of GMC Jammu were included in the study. The patients were admitted and were evaluated for the presence of various risk factors related to the disease with a particular focus on Alcohol intake, Diabetes, Age, IV drug abuse and smoking. The patients were admitted in the hospital and were evaluated and kept under observation till recovery. All baseline investigations, Ultrasonography of abdomen, Contrast CT scan of abdomen and HbA1c were ordered in all patients.

Observations:-

93% of patients in our study were males as shown in figure below:

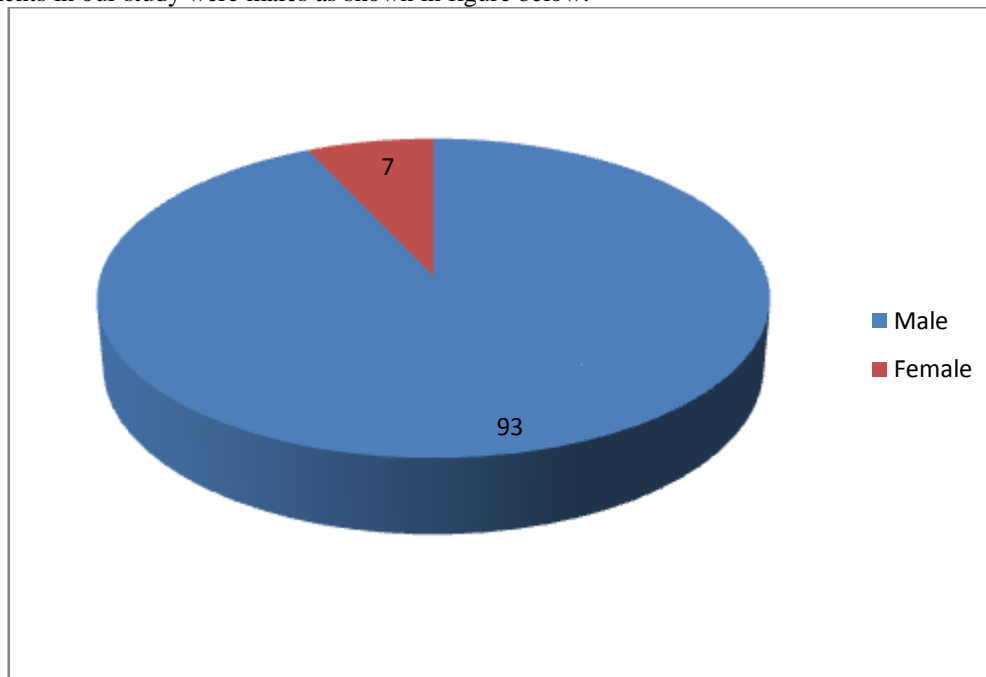


Fig 1:- Sex distribution of patients.

Out of total 100 patients in our study 75 were alcoholic and all were males as shown in figure below:

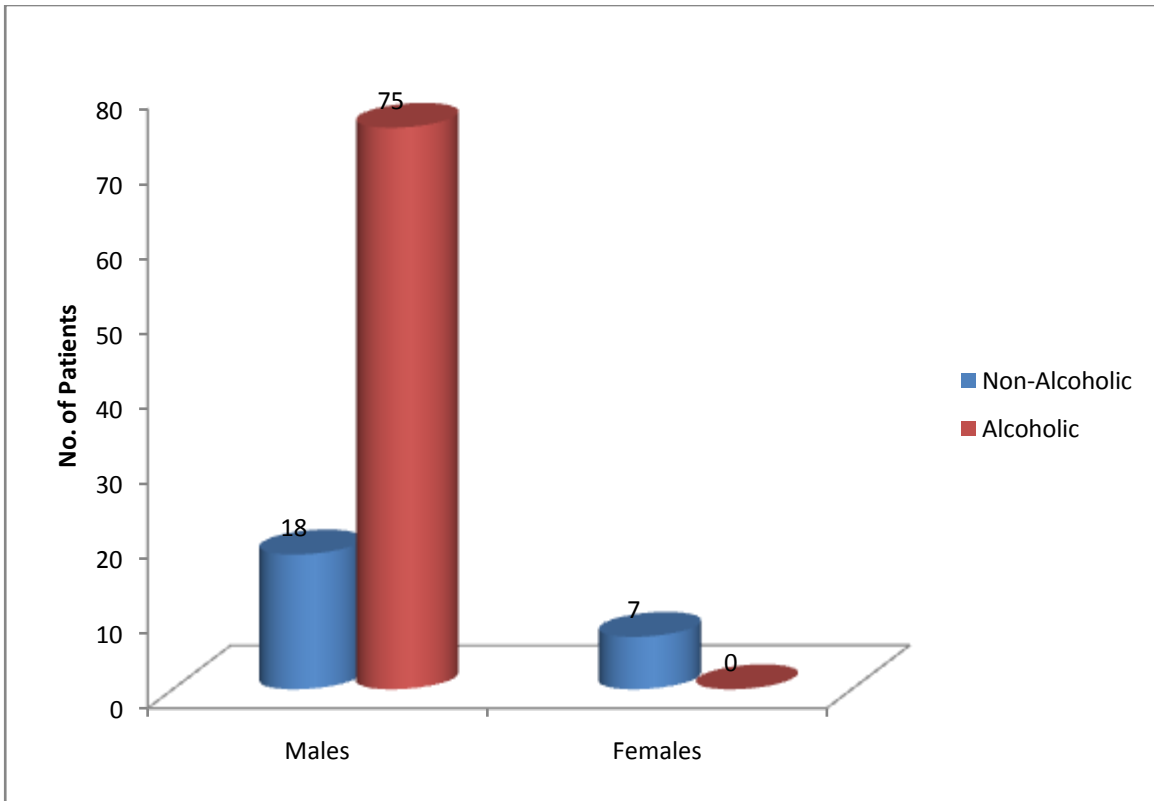


Fig 2:- Alcoholic and Non Alcoholic patients in our study.

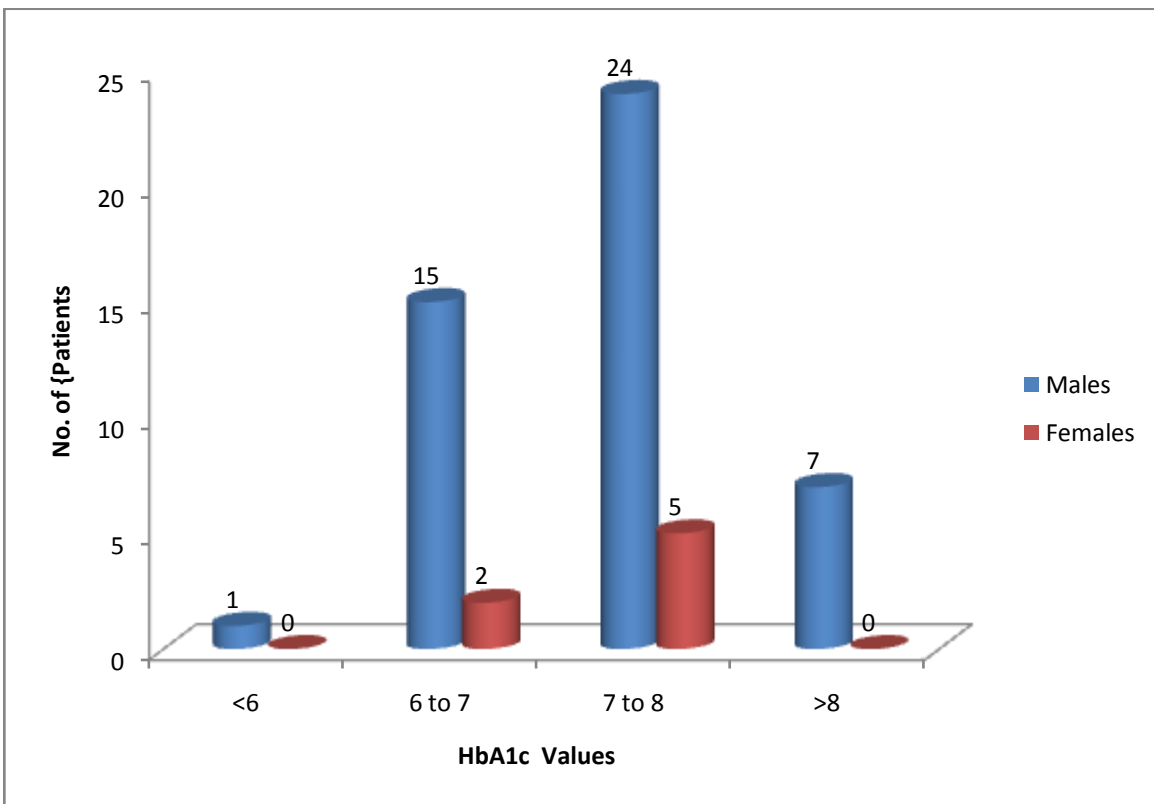


Fig 3:- HbA1c value demonstrating diabetic control in our patients.

Other risk factors noted in our study were as:

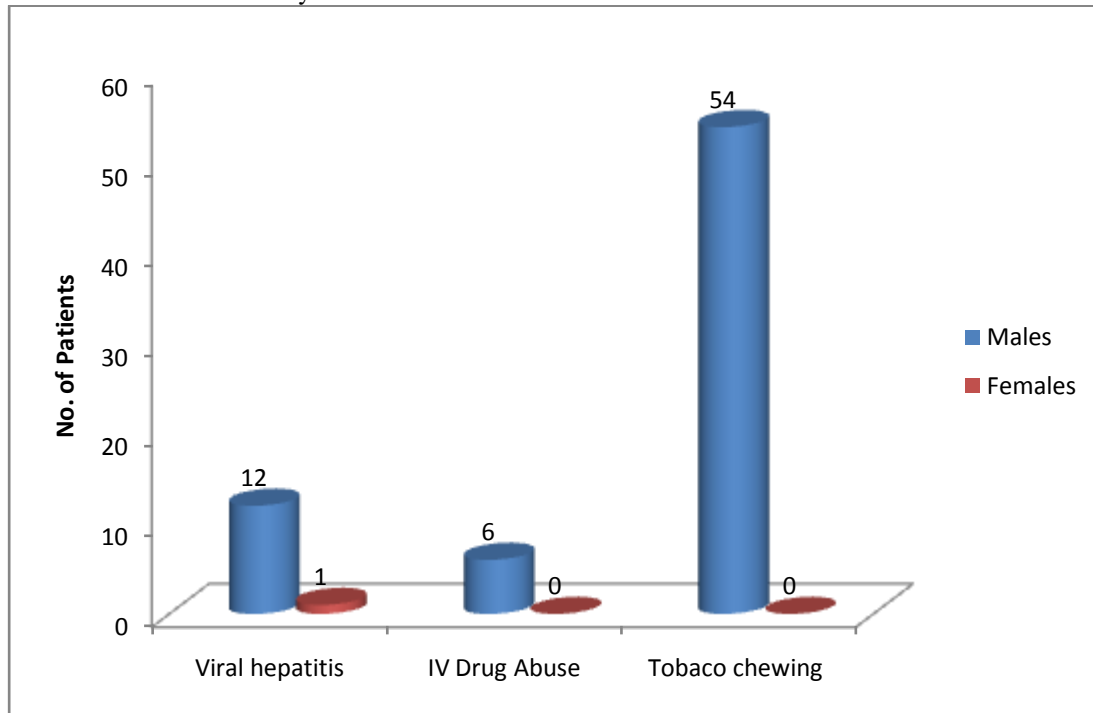


Fig 4:- Others risk factors noted in our study.

Discussion:-

Liver abscess remains one of the common indications for in hospital and emergency admissions in our hospital. In a total of 100 patients included in our study, 93 were males and 7 were females. This is in consistent with many other studies done so far in the literature demonstrating higher incidence of liver abscesses in males.{3}.Alcohol and diabetes are well known documented risk factors in pyogenic liver abscess{4}. We observed that 75 out of 100 patients with liver abscess were alcoholic and all were males in our study. While 54 patients in our study were diabetic we noticed that about 29 patients had poorly controlled diabetes with HbA1c > 7 and 17 had HbA1c between 6-7. Only one patient had HbA1c <6 in our study but he was a chronic Alcoholic. Analysing Alcohol and Diabetes together we observed that patients with both Alcoholism and diabetes particularly had larger and liquefied abscesses. 47 patients in our study were Alcoholic with diabetes and most of these patients had HbA1c values between 6-8. 61.7% of such patients had HbA1c between 7-8 while as 36.2% had values between 6-7. The incidence of liver abscess in patients with diabetes only in our study was 7% {5} and all these patients had HbA1c >8 while as the incidence of liver abscess in Alcoholic with diabetes was 47% in our study. 6 patients in our study had history of IV drug abuse and all were alcoholic also. 9 patients in our study who presented with more toxic symptoms had viral hepatitis. Majority 6 out of 9 were hepatitis C positive in our study.

Also a significant number of patients 54% in our study had the habit of tobacco chewing also. However whether this is a separate risk factor or a contributing factor to liver abscess could not be elucidated as all these patients were either alcoholic or diabetic also.

Conclusion:-

From our observations, we concluded that though diabetes with poorly controlled blood sugar is a significant risk factor for the development of liver abscess. The significant burden of the disease in the community is due to synergistic effect of alcoholism and diabetes in individuals. We suggest that all alcoholic patients with diabetes should have a strict regulation of their blood sugar done with 4 monthly HbA1c levels not allowed shoot beyond 6 U/dl. However, further validation of the hypothesis may need further large sample analytical studies.

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