



Original Research Article

Correlation of spleen size with oesophageal varices in cirrhosis of liver

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Abstract

Esophageal varices is the most dreaded complications of cirrhosis of liver responsible for high mortality and morbidity in these patients. As per current guidelines these patients need to go periodic screening with upper Gi endoscopy to detect and institute prophylactic measures if needed.

However this poses a great burden on patients as well as on doctors in our setup. In this study we aim to identify any correlation between spleen size and presence of oesophageal varices in cirrhosis of liver patients.

Methods: 50 patients with cirrhosis of liver with no history of Gi bleeding who were admitted in hospital from April 2018 to November 2018 were studied in this prospective observational study. Apart from history and physical examinations they were subjected to baseline investigations. Ultrasoundography abdomen was used for spleen size and upper gastrointestinal endoscopy for varices.

Results: Out of 50 patients studied 46 (92%) were males and varices were present in 42 (84%). A cut off value of 100 mm of splenic diameter on ultrasonography predicts the presence of varices with positive predictive value of 93.33%, p value of 0.027, sensitivity of 66.7% and specificity of 75%.

Conclusion: From our study we concluded that there is significant correlation between splenic size and presence of oesophageal varices in cirrhosis of liver patients. This along with other non-invasive investigations can be used to avoid unnecessary GI endoscopies in cirrhosis of liver patients.

Keywords: Cirrhosis of liver, oesophageal varices, endoscopy, spleen size.

Introduction

Cirrhosis is a pathological entity with cardinal features of extensive fibrosis and regenerative nodules. This results in portal hypertension due to increase in splanchnic blood flow secondary to

vasodilation and resistance to blood flow in cirrhotic liver. Oesophageal varices is one of the major complications of portal hypertension. Its prevalence varies from 50-60% in patients with cirrhosis of the liver. About one-third of

patients die of bleeding oesophageal varices. The risk of initial bleeding from varices is about 35 % within 2 years of detecting varices mostly in first year.

Current guidelines suggest screening for varices by upper Gi endoscopy in all patients diagnosed cirrhosis of liver and then follow up with repeated endoscopies 2-3 yearly with no varices on initial screening and 1-2 yrs in small varices.

Such approach has limitations, endoscopy is an invasive procedure with complications although not frequent and it's is not as effective as only 10-36% patients of cirrhosis liver have varices on initial screening. So search for non invasive approaches have been the prime focus of many studies in past. Thrombocytopenia, fibro scan and splenic size are some of the non invasive approaches used in past studies. Of these spleen diameter on ultrasound abdomen is simple, cost effective and promising.

Aims and Objectives

- To identify the correlation of spleen size with presence of oesophageal varices in patients with cirrhosis of liver without any previous evidence of GI bleeding.
- To assess the ability of this parameter as non invasive tool to predict the presence of oesophageal varices
- To identify candidates for surveillance endoscopy based on this parameter.

Materials and Methods

This descriptive observational clinical study was carried in Dept. Of medicine TMU Moradabad on patients admitted in hospital from April 2018 and November 2018 who was fulfilling the inclusion criteria of

- Cirrhosis of liver diagnosed with history, physical examination, liver function test, fibro scan and ultrasound abdomen.
- No past history of upper or lower GI bleeding.

Exclusion criteria

- Patients with past history of Gi bleeding.

- Patients who in past or presently are on treatment for oesophageal varices/any banding or surgery.
- Patients with fever in past 3 weeks or found to have some other cause/causes for splenomegaly.

Discussion

Eventually all patients of cirrhosis of liver develop oesophageal varices and there is always high risk of bleeding in these cases. However to ease the medical and economic burden there is always a need of non invasive methods to predict the patients with high probability of varices in whom invasive procedures like upper GI endoscopy can be used. In past many studies have documented good predictive value of various non-invasive variables for presence or absence of varices in cirrhosis patients. Our study was one of the attempts for the same with a simple and commonly available non-invasive investigations that is spleen diameter on ultrasound abdomen.

Out of 50 patients we studied majority were males with 46 (92%) and 4 (8%) were females. Mean age of our patients was 42.5years with youngest of 30 years and oldest of 64 years. Common etiology for cirrhosis of liver in our patients was hepatitis c 21 patients (42%) followed by alcohol 20 patients (40%). Out of 50 patients, 20 (40%) were having a spleen size of less than 100 mm on USG abdomen and rest(60%)having diameter of 100-200 mm. In patients of spleen size of lesser than 100 mm 14(70%) out of 20 were found to have oesophageal varices on endoscopy whereas in patients with spleen diameter 100 -200 mm 28(93%) out of 30 showed varices. A cut off value of 100 mm we found that it has significant positive correlation with presence of varices with positive predictive value of 93.33% and p value 0.027 however with low sensitivity (66.7)and specificity (75).

Summary

We studied 50 patients with cirrhosis of liver. All patients were subjected to baseline investigations,

USG Abdomen for bipolar spleen diameter and upper GI endoscopy for presence of oesophageal varices. We assessed role of spleen size in predicting the presence of oesophageal varices. When cut off value of 100 mm of spleen size on USG abdomen was used we found a significant correlation between spleen size and presence of oesophageal varices with positive predictive value of 93.3% and p value of 0.027.

Conclusion

From this study we concluded that there is significant positive correlation of spleen size and presence of oesophageal varices in cirrhosis of liver patients. This can be used as non invasive marker for presence of oesophageal varices in patients of cirrhosis of liver and thus subset of patients requiring invasive procedures like upper GI endoscopy. This will reduce burden on doctors as well as on patients and will be cost effective in our settings.

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