

A CORRELATIONAL STUDY ON SPLEEN STIFFNESS AND THE PRESENCE AND SEVERITY OF ESOPHAGEAL VARICES IN CIRRHOTIC PATIENTS

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ABSTRACT

Introduction: Bleeding esophageal varices is a complication of liver cirrhosis resulting from portal hypertension that carries significant morbidity, mortality and healthcare costs. There is a need for a safe, reproducible and non-invasive surrogate marker to accurately screen for esophageal varices. Spleen Stiffness can predict the presence and severity of varices in cirrhotic patients with high diagnostic accuracy. However, local data establishing the usefulness of splenic stiffness in predicting the severity of esophageal varices is lacking.

Objectives: To determine the correlation of splenic stiffness measured by transient elastography to presence and severity of esophageal varices.

Materials and Methods: An Ambispective analytic cohort study. A total of 29 patients underwent Spleen stiffness determination by Point Shear wave Elastography and Upper-Gastrointestinal endoscopy to evaluate for esophageal varices. Relationships between the parameters were characterized using Spearman's correlation coefficients. One-way ANOVA and Fisher's exact test was used to determine the difference between four different grades of esophageal varices.

Results: 19 patients (65.5%) had varices with grade 1 (n=5, 17.24%), grade 2(n=7, 24.14%), and grade 3 (n=7, 24.14%) respectively. There was a significant difference among four groups in terms of spleen diameter (p = 0.048) and Spleen Stiffness (p= <0.001). A strong positive correlation of Spleen stiffness and severity of esophageal varices (r = 0.821) was noted. Spleen diameter and severity of esophageal varices were directly correlated but to a lesser degree (r= 0.446).

Conclusion: Spleen elastography appears to be a reliable, non-invasive and cost-effective method of variceal screening and should be considered in cirrhotic patients.

KEYWORDS: *Esophageal Varices; Elastography; Spleen Diameter; Transient Elastography;*

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