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ROLE OF SPLEEN ELASTOGRAPHY IN PREDICTING SEVERITY OF ESOPHAGEAL VARICES

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Elastography is a non-invasive imaging technique used to evaluate stiffness/elasticity of human tissues. It can be performed by ultrasonography or magnetic resonance imaging. Ultrasound elastography (US-E) has gained more acceptance due to wider availability, ease of examination and shorter examination time relative of magnetic resonance elastography (MR-E). For long US-E has been in use for determining the severity of liver disease and predicting its prognosis. Recently, there is a growing interest towards assessment of spleen stiffness / elastography, considering the pivotal role of spleen in splanchnic circulation during the evolution of liver cirrhosis, portal hypertension & esophageal varices.US-E using acoustic radiation force impulse (ARFI) technique allows the quantitative/objective assessment of spleen stiffness. Hence, a pilot study is conducted to evaluate the role of splenic elastography in predicting the occurrence & grading of esophageal varices.

Aim: To evaluate the association of spleen stiffness (SS) as measured by acoustic radiation force impulse elastographic technique with the presence and grading of esophageal varices.

Material & Methods: Ten patients with features of chronic hepatic disease and/portal hypertension who were candidates of upper gastrointestinal endoscopy were included in our study. Splenic elastography measurement values (in m/sec) along with presence/absence & grade of esophageal varices on endoscopic examination were recorded. The diagnostic utility of non-invasive method splenic elastography for predicting varices and their grade on endoscopy was then calculated.

Results: Splenic stiffness (ARFI values) in m/sec correlated with grade of esophageal varices on endoscopy being significantly higher in patients with higher grades of varices who experienced variceal hemorrhage than in those who did not.

Conclusion: Spleen stiffness measured by ARFI elastography is a reliable predictor of esophageal varices and can be used as a noninvasive means for predicting the presence and grade of esophageal varices.

Note:

BIOGRAPHY

Rajul Rastogi, a post-graduate in radio diagnosis has also done advanced diploma nutrition dietetics, dip card, distance learning course and diploma computer application. He is a fellow of international medical sciences academy and Indian radiology & imaging, besides being a member of multiple prestigious academies including national academy of medical science. Currently, he is an assistant professor in Teerthanker mahaveer medical college & research Centre, Moradabad, up and is involved in teaching MBBS & MD students. He has been guest speaker in multiple CME & conferences and has chaired scientific sessions in such gatherings as well. He has published more than 90 scientific papers in International Journals besides being an author & co-author of more than 50 chapters in more than 15 medical books. He is an editorial board member as well as reviewer for more than thirty International journals. He is also a PG program consultant & member board of studies for Texila American University, Guyana, South America. He has keen clinical research interest in imaging of variety of maxillofacial, neurology, gastrointestinal and musculoskeletal imaging.

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