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Echocardiographic and electrocardiographic predictors for adverse outcomes in cirrhotic patients hospitalized for spontaneous bacterial peritonitis

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Background: Cirrhotics who develop spontaneous bacterial peritonitis (SBP) suffer from cirrhotic cardiomyopathy. We hypothesized that EKG and echocardiographic abnormalities would help prognosticate survival in cirrhotics with SBP in addition to existing scoring systems.

Methods: Cirrhotics hospitalized at Einstein Medical Center from 01/01/2005 to 6/30/2012 for SBP who did not receive a transplant within a year, were included. Patients were classified as QTc duration as low (<480msec) versus high (≥480msec) and E/E' low (<10) versus high (≥10) as a marker for worsening diastolic dysfunction on echocardiogram. We calculated the 1 year survival for QTc low vs. high and E/E' low vs. high subgroups with Kaplan Meier curves. We used Cox proportional hazards models to adjust for the effect of QTc and E/E' ratio on 1 year survival for different independent variables.

Results: Among 112 patients with available QTc data, 78 were classified as QTc low and among 64 patients with available E/E' ratio data, 23 were classified as E/E' low. Both QTc and E/E' ratio predicted worse 1 year survival (HR=2.16, 95% CI 1.29-3.49 for QTc and HR 2.65, 95% CI 1.31-5.35 for E/E' ratio), but only E/E' ratio remained significant after adjustment for Child Pugh stage, MELD score, age, acute kidney injury, hypertension, diabetes, hyperlipidemia, and gender (HR=3.26, 95% CI 1.22-9.82) in the multivariate analysis.

Conclusion: Elevated E/E' ratio, representative of worsening diastolic dysfunction, is an independent predictor of 1 year survival in cirrhotic patients who present with SBP.

Biography

Mahek K. Shah did his Medical Graduation at Seth GS Medical College, India. And after he moved to US and he is currently doing his Internal Medicine resident at Einstein Medical Centre, Philadelphia. His main research area is Cardiology and he had done many projects in Cardiology during his training period.

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