

M-07 15:00 – 15:10

**Double Contrast Material-enhanced MR Imaging of Cirrhotic Liver from
Viral Hepatitis: Correlation of Right Posterior Hepatic Notch and
Expanded Gallbladder Fossa with Hepatic Fibrosis**

유정식, 심재호, 정재준, 김주희

연세의대 영동세브란스병원 영상의학과

Purpose: To evaluate the diagnostic ability of extended gallbladder fossa sign and right posterior hepatic notch sign for hepatic fibrosis determined by double contrast material-enhanced MRI.

Materials and Methods: For the cirrhotic or pre-cirrhotic patients from chronic B (n = 96) or C (n = 13) viral hepatitis who underwent gadopentate dimeglumine-enhanced dynamic MR imaging followed by ferucarbotran-enhanced gradient echo imaging, two blinded radiologists determined the degree of parenchymal fibrosis into three groups (I, pre-cirrhotic or minimal fibrosis, II, mild to moderate fibrosis; III, advanced cirrhosis) according to the degree of parenchymal reticulations and nodularity in consensus. The presence of a sharp notch in the posterior-medial surface of right lobe of the liver and expanded gallbladder fossa was determined by two independent readers in each group of the patients.

Results: The interobserver agreement was good and excellent in evaluating the presence of right posterior hepatic notch ($\kappa = 0.772$) and expanded gallbladder fossa ($\kappa = 0.812$), respectively. The right posterior hepatic notch was demonstrated limitedly in 4.5% and 7.1% of the patients in group I and II, respectively, which was abruptly increased (34%, observer 1; 31%, observer 2) in group III of advanced cirrhosis ($p < 0.01$), whereas the expanded gallbladder fossa sign was rather gradually increased with the increasing degree of cirrhotic changes from I to III (mean prevalence of group I, 50%; II, 61%; III, 78%). The mean prevalence of right posterior hepatic notch was significantly lower ($p < 0.05$) in hepatitis B (17%) than C (50%) whereas there was no significant difference ($p > 0.5$) between hepatitis B (67%) and C (73%) for the expanded gallbladder fossa.

Conclusion: Due to the low prevalence, right posterior hepatic notch has a very limited value in determining the presence or degree of cirrhosis especially from hepatitis B virus infection.