CAGE-B and SAGE-B are better than PAGE-B in predicting HCC after 5 years of entecavir treatment

건양대학교 의과대학 내과학교실[1], 전북대학교 의과대학 내과학교실[2], 연세대학교 의과대학 내과학교실[3]

김용준[1], 전혜연[1], 이태희[1], 김인희[2], 김승엽[3]

Background/Aims: The PAGE-B model for predict risk of hepatocellular carcinoma(HCC) is consisted with factors at the initiation of antiviral therapy (AVT), while the SAGE-B and CAGE-B models are consisted with factors at 5-year of AVT. The aim of this study is to compare accuracy of three risk prediction models for HCC development after 5-year of AVT in patients with chronic hepatitis B (CHB).

Methods: A total of 1,335 patients who began entecavir (ETV) treatment from 2006 to 2011 and were monitored more than 5 years were enrolled.

Results: At the beginning of ETV treatment, the median PAGE B model score was 14, and the median age of patients was 49. At 5-year of ETV treatment, the median score of SAGE-B model and CAGE-B model were 6 and 6, respectively. During the study period, 93 (7.0%) patients developed HCC after 5-year of treatment. In multivariate analysis, three models significantly associated with HCC development (hazard ratio [HR] for PAGE-B=1.151; HR for SAGE-B=1.340; HR for CAGE-B=1.327; all P<0.001). The risk of HCC development in high-risk group of three risk prediction models was found to be significantly higher than those of medium- and low-risk groups (all P<0.05). The areas under the receiver operating characteristic curves of the SAGE-B (0.772-0.844) and CAGE-B (0.785-0.838) models were significantly higher than those of PAGE-B model (0.696-0.745) in predicting HCC development after 5-year of treatment (all P<0.05).

Conclusions: The SAGE-B and CAGE-B models might be superior to PAGE-B model in predicting HCC development after 5-year of ETV treatment in patients with CHB.