Background: Although cleavage is a potent antiviral drug for the management of chronic hepatitis B (CHB), emergence of drug resistance is the one of the major drawbacks. Still, optimal management of cleavage resistance needs to be elucidated.

Methods: On March 2010, we retrospectively reviewed the medical records and registered cleavage-resistant CHB patients to the cohort. Prospective follow-ups were done until March 2011. Antiviral efficacy of each rescue regimen was evaluated.

Results: A total of 118 patients were registered. Patients received adefovir (n=15, group 1), adefovir plus cleavage (n=23, group 2), adefovir plus lamivudine (n=37, group 3), or entecavir (n=43, group 4) over 48 weeks. Baseline characteristics were not different between the groups. Mean HBV DNA were 6.4, 5.8, 5.3, 5.7 log copies/mL at baseline (p=0.077), 4.9, 2.6, 3.3, 3.3 log copies/mL at week 24 (p=0.003), and 3.4, 2.8, 3.4, 3.2 log copies/mL at week 48 (p=0.816), respectively. Mean degrees of HBV DNA reduction from baseline were -1.7, -3.2, -2.0, -2.4 log copies/mL at week 24 (p=0.017), -3.2, -3.0, -1.9, -2.7 log copies/mL at week 48 (p=0.401), respectively. HBV DNA undetectability (<60 IU/mL) was 0%, 33.3%, 16.7%, 22.9% at week 24 (p=0.131) and 30.3%, 31.3%, 23.1%, 31.3% (p=0.95), respectively. HBV DNA reduced significantly from baseline to week 24 and week 48 in all groups (p<0.05). Wilcoxon signed rank test. Levels of mean ALT and rate of ALT normalization were not statistically different between the groups through 48 weeks. HBeAg loss (22.2%, 14.3%, 15.8%, 16.0%, respectively, p=0.964) and HBeAg seroconversion (11.1%, 10.0%, 20.0%, 14.3%, respectively, p=0.920) rates were not different, either. Elevations of CPK (>3 × ULN) were noted in 2 patient from group2 and 1 patient from group 3.

Conclusions: Although adefovir monotherapy showed slow decline of HBV DNA until week 24, HBV DNA significantly decreased in most of groups through 48 weeks of rescue therapy.

Keyword: Clevudine, Lamivudine, Adefovir, Entecavir, resistance