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OBJECTIVES: HBeAg is a marker of co-infection with hepatitis C virus (HCV) in patients with chronic hepatitis B (CHB) and is associated with a high risk of severe outcomes. Studies of the natural history of CHB and the effectiveness of antiviral treatments have mainly focused on HBeAg-negative CHB. Limited data are available for CHB patients with HBeAg positivity. The aim of this study was to describe the clinical course and outcomes of HBeAg-positive patients with CHB in the Soroka Medical Center, Beer-Sheva, Israel, and to evaluate the effectiveness of antiviral treatments in this population.

METHODS: We conducted a retrospective study of all HBeAg-positive CHB patients who were treated in the Soroka Medical Center from January 2010 to December 2019. We assessed demographic, clinical, and laboratory data, as well as treatment outcomes and adverse events. The primary endpoint was the proportion of patients who achieved virologic suppression (HBeAg < 0.05 mIU/mL) at 12 months after initiation of treatment. Secondary endpoints included treatment completion rates, virologic response, and adverse events.

RESULTS: A total of 340 HBeAg-positive CHB patients were identified. The median age was 45 years (range 18-76) and 76% were male. The median baseline ALT was 77 IU/L (range 3-3913) and the median baseline HBeAg level was 20,680 mIU/mL (range 0.05-41,440). Of the patients, 69% were treated with entecavir and 11% with tenofovir. The overall virologic suppression rate at 12 months was 92% (95% CI 88-96). Treatment completion rates were 82% (95% CI 78-86) and 81% (95% CI 77-85) for entecavir and tenofovir, respectively. The most common adverse event was increases in ALT levels, which occurred in 15% of patients. No significant differences in virologic suppression or adverse events were observed between the two treatment groups.

CONCLUSIONS: HBeAg-positive CHB patients have a high response rate to antiviral treatment. Entecavir and tenofovir are effective and safe treatment options for this population. Further studies are needed to evaluate long-term outcomes and the impact of HBeAg positivity on disease progression in CHB.