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**Tenofovir and Entecavir are the Most Effective Antiviral Agents for Chronic Hepatitis B: A Systematic Review and Bayesian Meta-Analyses.**

Woo G, Tomlinson G, Nishikawa Y, Kowgier M, Sherman M, Wong DK, Pham B, Ungar WJ, Einarson TR, Heathcote EJ, Krahn M.

**BACKGROUND & AIMS:** The relative efficacies of licensed antiviral therapies for treatment-naive chronic hepatitis B (CHB) infection in randomized controlled trials have not been determined. We evaluated the relative efficacies of the first 12 months of CHB treatments.

**METHODS:** Drugs evaluated were lamivudine, pegylated interferon, adefovir, entecavir, telbivudine, and tenofovir, as monotherapies and combination therapies, in treatment-naive individuals. Databases were searched for randomized controlled trials of the first 12 months of therapy in hepatitis B e antigen (HBeAg)-positive and/or HBeAg-negative patients with CHB published in English before October 31, 2009. Bayesian mixed treatment comparisons were used to calculate the odds ratios, including 95% credible intervals and predicted probabilities of surrogate outcomes to determine the relative effects of each treatment.

**RESULTS:** In HBeAg-positive patients, tenofovir was most effective in inducing undetectable levels of HBV DNA (predicted probability, 88%), normalization of alanine aminotransferase (ALT) levels (66%), HBeAg seroconversion (20%), and hepatitis B surface antigen loss (5%); it ranked third in histologic improvement of the liver (53%). Entecavir was most effective in improving liver histology (56%), second for inducing undetectable levels of HBV DNA (61%) and normalization of ALT levels (70%), and third in loss of hepatitis B surface antigen (1%). In HBeAg-negative patients, tenofovir was the most effective in inducing undetectable levels of HBV DNA (94%) and improving liver histology (65%); it ranked second for normalization of ALT levels (73%).

**CONCLUSIONS:** In the first year of treatment for CHB, tenofovir and entecavir are the most potent oral antiviral agents for HBeAg-positive patients; tenofovir is most effective for HBeAg-negative patients.

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