Introduction: The difference in response to hepatitis B virus (HBV) based on sex has been well documented, but the prognostic impact of sex is not clear. We aimed to identify the prognostic impact of sex on the natural history of chronic inactive hepatitis B virus.

Methods: We conducted a prospective cohort study of 69 patients, 30-60 years of age with newly diagnosed inactive hepatitis B virus. Patients were followed for a total of 15 years. We measured the liver enzymes and calculated the AST platelet ratio index (APRI) score at the time of diagnosis and 15 years later. Uni/multi variant analyses were done based on sex in order to identify if sex is independently associated with different outcomes.

Results: Of the 69 patients, 37 (54%) were females, and 32 (46%) were males. The mean APRI scores at the time of diagnosis were females 0.31 ± 0.13, and males 0.36 ± 0.21 (P = .20). At the end of the 15 years follow up, mean APRI scores were females 0.32 ± 0.39, and males 0.33 ± 0.30 (P = .90). The only variable that showed independent significant association with sex was the platelet count. The mean platelet count for males and females at time of diagnosis was 249.3 ± 56.5 and 238.9 ± 62.0, respectively. In contrast, 15 years later the mean platelet count for the females significantly increased to 255.0 ± 72.0, while that of the males dropped to 231.1 ± 61.8 (P = .03).

Conclusion: There is paucity of data regarding the impact of sex on the prognosis of chronic inactive hepatitis B virus. Based on our findings, both males and females have equal outcomes, and the prognosis of inactive hepatitis B virus is benign regardless of sex. However, the platelet count is significantly associated with sex, with males being at a higher risk of having decreased platelet count as the disease progresses. Additional large scale prospective studies are needed to validate these findings.