Symptomatic Burden and Disease Staging in Chronic Hepatitis B: Insights from a Regional Cohort in Central India

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ABSTRACT:

Background: Chronic Hepatitis B (CHB) remains a significant public health challenge, characterized by regional variations in prevalence and healthcare access. Understanding the symptomatic burden and clinical staging is essential for effective disease management.

Objective: To evaluate the clinical, demographic, and biochemical analysis of CHB patients in Central India.

Materials & Methods: A cross-sectional observational study conducted between January 2024 and June 2025 at two centers in Madhya Pradesh (Bhopal and Sagar). Data from 120 HBsAg-positive were analyzed. Clinical history, high-risk behaviors, biochemical Liver Function Tests (LFT), and Liver Stiffness Measurement (LSM) via Transient Elastography (FibroScan) recorded.

Results: Study population was predominantly male (65%), with a mean age of 42.83±15.13 years. Residents were distributed urban (43.3%), rural (35.8%), and peri-urban (20.8%) areas. The most common symptom was fatigue (45.8%), jaundice (33.3%) and abdominal pain (30%). Regarding high-risk behaviours, 25.8% reported history of unprotected sex and 16.7% previous blood transfusions. Biochemical analysis showed mean ALT and AST levels of 46.74±15.64 U/L and 40.07±12.09 U/L, respectively. FibroScan results revealed a mean LSM of 7.56±2.82 kPa, with 15.8% of participants exhibiting signs of advanced disease (ascites) and 31.7% having splenomegaly. Only 24.2% of the cohort were receiving antiviral therapy.

Conclusion: The findings highlight a significant symptomatic burden, and a predominance of patients in the immune-tolerant or immune-active phases (F1–F2 fibrosis). The study reveals a critical gap in vaccination and antiviral treatment uptake. Integrating non-invasive tools like FibroScan into regional primary care is vital for early identification and achieving the goal of HBV elimination by 2030.

KEY WORDS: Chronic Hepatitis B, FibroScan, Central India, Liver Stiffness, Symptomatic Burden, Public Health.