

Prevalence and Risk Factors of Significant Hepatic Fibrosis in Omani Patients with HBeAg-negative Chronic Hepatitis B Virus Infection: A Retrospective Study

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Dear Editor,

We read with interest the study by Al-Shuaili et al,¹ published in the November 2024 issue of the *Oman Medical Journal*.

Using two-dimensional shear-wave elastography (2D-SWE), the authors reported the following distribution of liver fibrosis (LF) among 200 Omani carriers of inactive hepatitis B virus (HBV): F0 = 142, F1 = 18, F2 = 3, F3 = 31, and F4 = 6 patients. Forty (20.0%) patients had significant LF (defined as $\geq$ F2), with significant predominance among those aged > 60 years ($p = 0.024$) and males ($p = 0.007$). Fatty alterations were identified as independent risk factors ($p = 0.044$).¹

In addition to the limitations acknowledged by the authors, we wish to draw their attention to an additional methodological issue. Irrespective of etiology, liver biopsy (LB) permits histopathologic assessment of disease-specific morphologic changes. Thus, it helps in diagnosis, evaluation of therapeutic response, and prognosis. Although LB is now used less commonly because of the newer non-invasive tools, it is still regarded as the gold standard to stage and grade many chronic liver diseases.²

Among noninvasive methods, 2D-SWE is considered accurate and reliable for the LF diagnosis. However, its effective application depends on appropriate liver stiffness cut-off values (LSCOVs). In patients with HBV infection, LSCOVs derived utilizing LB as the reference method have been reported as follows: $F \geq 1$: 5.92 kPa, $F \geq 2$: 7.69 kPa, $F \geq 3$: 8.97 kPa, and $F \geq 4$: 12.15 kPa.³

In their methodology, Al-Shuaili et al,¹ stated that their LF staging was based on LSCOVs referenced to transient elastography (TE) as follows: F0: no fibrosis (≤ 7.1 kPa), F1: minimal fibrosis (7.1–7.8 kPa), F2: significant fibrosis (7.8–8.0 kPa), F3: severe fibrosis (8.0–11.5 kPa), and F4: cirrhosis (> 11.5 kPa).⁴ There are noticeable differences in LSCOVs in 2D-SWE based on the two different reference methods. Since LB remains the firm benchmark in diagnosing LF,² adopting LSCOVs based on LB³ rather than TE⁴ as a reference standard could potentially yield more clinically valid results.

Despite these limitations, we agree that periodic monitoring of inactive HBV carriers for LF is essential to improve patient survival and long-term outcomes.

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