

**FASTER PROGRESSION OF  
LIVER FIBROSIS IN CHRONIC  
HEPATITIS DUE TO HCV  
COMPARED TO HBV IN HIV+  
PATIENTS IN THE  
TENOFOSFIR ERA**

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**BACKGROUND**

**Both chronic hepatitis B and C progress faster to cirrhosis in HIV+ patients.**

**Progression could be further accelerated in dually HBV-HCV patients. It is unclear whether liver fibrosis progression is different in HBV vs HCV, and what is the impact of antiretroviral therapy, either enhancing immune status and/or suppressing HBV replication when antiretrovirals active against HBV are used.**

**The aim of this study was to compare the hepatic fibrosis staging in a large group of HIV+ patients with chronic hepatitis B and/or C.**

**PATIENTS  
&  
METHODS**

**All HBsAg<sup>+</sup> patients with HIV infection who underwent liver fibrosis assessment using elastometry (FibroScan) at our center were compared with a group of HCV/HIV-coinfected patients.**

# RESULTS

**A total of 231 subjects were examined. Overall, 92% of 72 HBsAg+ patients were under antiretrovirals active against HBV (35% TDF+FTC; 33% TDF+3TC; 14% 3TC; 10% TDF) and 82% had undetectable serum HBV-DNA.**

**Patients with chronic hepatitis C and dual HBV/HCV had severe liver fibrosis more frequently than subjects with chronic hepatitis B alone. In the multivariate logistic regression analysis, significant hepatic fibrosis ( $\geq 9.5$  KPa) was associated with HCV vs HBV (OR 3.4; 95%CI: 1.2-9.9) and with lower CD4 counts (OR per every increment of 100 cells/ul: 0.8; 95%CI: 0.7-0.9).**

**Elevated alcohol consumption (>60 gr/day) tended also to be associated with significant fibrosis (OR 2.1; 95%CI: 0.96-4.45; p=0.06). The risk for developing significant liver fibrosis was further increased in patients with dual HBV/HCV vs HBV alone (OR 9.4; 95%CI: 2.7-32.6).**

**Table 1. Main characteristics of HIV-infected patients in Hospital Carlos III cohort**

|                                     | <b>HBV (44)</b>      | <b>HCV (159)</b>     | <b>HBV/HCV (28)</b> <i>P</i> | <i>P</i>        |
|-------------------------------------|----------------------|----------------------|------------------------------|-----------------|
| <b>Gender (male)</b>                | <b>43 (98%)</b>      | <b>108 (68%)</b>     | <b>21 (75%)</b>              | <b>&lt;0.01</b> |
| <b>IDU</b>                          | <b>6 (14%)</b>       | <b>119 (86%)</b>     | <b>25 (89%)</b>              | <b>&lt;0.01</b> |
| <b>Age (years; median; IQR)</b>     | <b>43 (38-48)</b>    | <b>43 (40-46)</b>    | <b>43 (39-45)</b>            | <b>0.7</b>      |
| <b>Alcohol &gt;60 gr/day</b>        | <b>10 (24%)</b>      | <b>59 (50%)</b>      | <b>8 (35%)</b>               | <b>0.01</b>     |
| <b>Median CD4 count (cells/ul)</b>  | <b>497 (325-680)</b> | <b>493 (322-660)</b> | <b>489 (345-638)</b>         | <b>0.8</b>      |
| <b>Plasma HIV-RNA &lt;50 cop/ml</b> | <b>33 (75%)</b>      | <b>94 (67%)</b>      | <b>26 (93%)</b>              | <b>0.006</b>    |
| <b>HAART</b>                        | <b>41 (93%)</b>      | <b>135 (85%)</b>     | <b>26 (93%)</b>              | <b>0.4</b>      |
| <b>PI</b>                           | <b>19 (43%)</b>      | <b>87 (55%)</b>      | <b>15 (54%)</b>              | <b>0.3</b>      |
| <b>Liver fibrosis (KPa)</b>         |                      |                      |                              |                 |
| <b>Mild (&lt;9.5) (F0-F1)</b>       | <b>36 (82%)</b>      | <b>103 (65%)</b>     | <b>13 (46%)</b>              | <b>0.01</b>     |
| <b>Moderate (9.5-13.9) (F2-F3)</b>  | <b>5 (11%)</b>       | <b>25 (16%)</b>      | <b>5 (18%)</b>               |                 |
| <b>Severe (≥14) (F4)</b>            | <b>3 (7%)</b>        | <b>31 (19%)</b>      | <b>10 (36%)</b>              |                 |

# CONCLUSIONS

**Progression to liver cirrhosis occurs less frequently in chronic hepatitis B than C (and particularly dual B/C hepatitis) in HIV+ patients receiving antiretrovirals with anti-HBV activity. Prolonged suppression of HBV replication might be the principal responsible for this benefit.**