Hepatitis C Virus Infection Increases Hepatitis Risk during Anti-tuberculosis Treatment

Jung-Yien Chien¹ ² ³, M.D., Junn-Yuan Wang³, M.D., Ph.D., Ruay-Ming Huang², M.D., Sheng-Yuan Ruan¹, M.D., Yin-Ju Chien¹, Chong-Jen Yu³, M.D., Ph.D., and Pan-Chyr Yang³, M.D., Ph.D.

¹ Department of Internal Medicine, National Taiwan University Hospital Yun-Lin Branch, Douliu, Yun-Lin County, Taiwan
² Chest Hospital, Department of Health, Executive Yuan, Rende Township, Tainan County, Taiwan
³ Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan

Purpose: To study the impact of hepatitis B virus (HBV) and hepatitis C virus (HCV) co-infection on clinically significant transaminase elevation during short-course anti-tuberculosis (TB) treatment.

Materials and methods: We prospectively observe 295 patients with active pulmonary TB with normal baseline liver biochemical test.

Results: During standard short-course anti-TB treatment, 25(8.5%) patients developed hepatitis and had a significantly higher mortality rate (32% vs. 7%, p=0.001; odds ratio=6.22 (2.0-17.6)). Multivariate analysis showed HCV co-infected individuals were more likely to develop transaminase elevations (odds ratio=3.43 (1.14-10.35); p=0.03) than those without HCV co-infection. They also had a longer duration of transaminase elevation than control(43.3 ± 40.4 vs. 13.5 ± 8.6 days, p=0.01). Co-infection with HBV was not associated with a higher rate of hepatitis but was with a later onset (102 ± 68.7 vs. 37.0 ± 31.9 days, p=0.01), higher peak alanine aminotransferase level and slower recovery (55.5 ±62.9 vs. 15.4 ± 10.8 days, p=0.01).

Conclusion: Even with normal baseline liver biochemical tests, HCV co-infection had higher incidence and longer course of hepatitis flares during anti-TB treatment. We suggest that screening for HCV infections before starting anti-TB treatment is helpful to plan the frequency of follow-up visits.