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Inflammatory bowel disease is no longer a risk factor of viral hepatitis infection in Asia

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Article: Prevalence of hepatitis B, hepatitis C and human immunodeficiency viral infections in patients with inflammatory bowel disease in north India **(Intest Res 2017;15:97-102)**

Inflammatory bowel diseases (IBD), composed of CD and UC, were once considered high risk factors of viral hepatitis infection. In 2001, an Italian study by Biancone et al.[1] reported that the infection rate by HCV or HBV in patients with CD was considerably high, up to 24.7%. The hepatitis B core antibody positivity was higher in patients with UC than in the control group (11.5% vs. 5.1%, *P*=0.02). This high prevalence of viral hepatitis in IBD patients might be attributed to the existence of a nosocomial transmission of these viral infections, such as blood transmissions and via surgical procedures. HCV transmission in the hospital has been reported, which suggests that patients with IBD are at a high risk of hepatitis infection.[2,3]

However, recent European studies have shown evidence that the prevalence rates of HBV and HCV infections are similar to those in the general population.[4,5] The prevalence rate of present and/or previous HBV and HCV infections in patients with IBD was 2.9% to 9.7%, which was much lower than that previously reported.[4,5] Several plausible factors exist for such a decrease in the prevalence of HBV and HCV infections in IBD, including blood transfusion safety measures, single-use materials, better aseptic perioperative rules, and improved decontamination procedures in endoscopy.

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In the current issue, Harsh et al.[6] showed that the risk of HBV and HCV infections in IBD patients was similar to that in the general population in north India. In this retrospective single-center study of 908 IBD patients, the HBsAg and anti-HCV positivity rates were 2.4% and 1.4%, respectively, similar to the community prevalence rates of infections in India (3.7% and 1%, respectively). The result of this study is noteworthy in that IBD is not a risk factor of viral hepatitis in the country endemic to HBV and HCV infections. This is consistent with the results of other Asian studies conducted in HBV-endemic areas such as China and South Korea. A recent Chinese study reported that the HBsAg positivity rates in CD and UC were 13.6% and 16.8%, respectively, which were not significantly different from those in the general population of southern China.[7] A study by Kim et al.[8] also showed that the prevalence of HBsAg in Korean IBD patients was similar to that in an age- and sex-matched control group (CD, 4.1%; UC, 3.3%; and control, 4.4%; *P*=0.713). Despite uncertainties, no increased risk of viral hepatitis infection was found in IBD patients even in the endemic areas. This might be attributed to the implementation of satisfactory preventive measures in hospitals and patients' avoidance of risk-associated behavior. Another important issue in the present study is that the risk of human immunodeficiency virus (HIV) infection in IBD patients is not higher than that in the general population (IBD, 0.1% vs. general population, 0.2%; *P*=0.31), which has not been fully evaluated before mainly because of the rarity of the incidence of HIV.

It is interesting that the authors showed that the HBV infection rate in intestinal tuberculosis was significantly higher than that in IBD (5.9% vs. 3.7%, *P*=0.04). Although the

exact reason for this risk in patients with intestinal tuberculosis was not described in the study, many previous studies confirmed the association between active tuberculosis and chronic HBV infection.[9] One possible explanation for this association might be the shared pathways of immune control by major histocompatibility complex class I-restricted CD8 T cells, which are important in both viral and mycobacterial control, possibly linking immune dysregulation in both HBV and mycobacterium tuberculosis infections.[9] Special attention for evaluation for HBV might be necessary for patients with tuberculosis infection.

This study has several limitations. First, the baseline characteristics of all patients with IBD were not described, such as the Montreal classification. Second, data on other HBV markers, such as anti-HBs and anti-HBc, were not available so that the HBV vaccination rate in IBD was not evaluated in the study. This is a crucial issue because patients in the IBD group, particularly young patients, have been known to have inadequate achievement of an effective vaccination state (anti-HBs positivity without anti-HBc), unlike normal controls.[8] This waning vaccination effect in IBD patients can be explained by the concurrent immunosuppressive therapy and aberrant Th1/Th2 immune response in IBD, which led to disturbances of cytokine secretion and vaccination response.[8] Therefore, full HBV markers should be evaluated in all patients at the time of IBD diagnosis.

Asian countries, including India, South Korea, and China, are facing a dramatic increase in the incidence of IBD population.[10] Hence, it is clinically relevant to assess the risks of HBV and HCV infections in patients with IBD from these countries. It may facilitate development of a vaccination strategy and other preventive measures against viral hepatitis reactivation in this population. The findings of the present study indicate that IBD should no longer be considered a risk factor of viral hepatitis infection in Asian countries.

REFERENCES

1. Biancone L, Pavia M, Del Vecchio Blanco G, et al. Hepatitis B and C virus infection in Crohn's disease. Inflamm Bowel Dis 2001;7:287-294.
2. Forns X, Martínez-Bauer E, Feliu A, et al. Nosocomial transmission of HCV in the liver unit of a tertiary care center. Hepatology 2005;41:115-122.
3. Salcedo-Mora X, Maté J, Medina J, Nam Cha SJ, Gisbert JP, Moreno-Otero R. Chronic hepatitis C and Crohn's disease: nosocomial infection treatment with PEG-interferon plus ribavirin. Digestion 2006;73:210-214.
4. Loras C, Saro C, Gonzalez-Huix F, et al. Prevalence and factors related to hepatitis B and C in inflammatory bowel disease patients in Spain: a nationwide, multicenter study. Am J Gastroenterol 2009;104:57-63.
5. Chevaux JB, Nani A, Oussalah A, et al. Prevalence of hepatitis B and hepatitis C and risk factors for nonvaccination in inflammatory bowel disease patients in Northeast France. Inflamm Bowel Dis 2010;16:916-924.
6. Harsh P, Gupta V, Kedia S, et al. Prevalence of hepatitis B, hepatitis C and human immunodeficiency viral infections in patients with inflammatory bowel disease in north India. Intest Res 2017;15:97-102.
7. He Y, Xu P, Chen Y, et al. Prevalence and influences of hepatitis B virus infection on inflammatory bowel disease: a retrospective study in southern China. Int J Clin Exp Med 2015;8:8078-8085.
8. Kim ES, Cho KB, Park KS, et al. Prevalence of hepatitis-B viral markers in patients with inflammatory bowel disease in a hepatitis-B-endemic area: inadequate protective antibody levels in young patients. J Clin Gastroenterol 2014;48:553-558.
9. Nooredinvand HA, Connell DW, Asgheddi M, et al. Viral hepatitis prevalence in patients with active and latent tuberculosis. World J Gastroenterol 2015;21:8920-8926.
10. Ng WK, Wong SH, Ng SC. Changing epidemiological trends of inflammatory bowel disease in Asia. Intest Res 2016;14:111-119.