EDITORIAL

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Regional Diversity of Hepatitis C Virus Prevalence: Seeking for Culture Specific Mode of Transmission

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See "Regional Distribution of Hepatitis C Virus Infection in the Republic of Korea, 2007-2011" by Geun-Yong Kwon, et al, on page 428, Vol. 8. No. 4, 2014

Chronic hepatitis C infection is one of the main causes of chronic liver disease, cirrhosis and hepatocellular carcinoma. Although means of eradicating hepatitis C virus (HCV) are on their way, an effective HCV vaccine is yet to be discovered. Current strategies for preventing HCV are to be closely related to the understanding of regional epidemiology and possible mode of infection.

South Korea is considered to be HCV low prevalent area reporting the general prevalence rate less than 1.5%.[1] However, Kwon *et al*.[2] reported that there are noticeable differences in HCV distribution among the regions and counties, highest being age-adjusted prevalence greater than 3.5% in a county of Busan, southwest coast of South Korea. Considering the approximated HCV prevalence in Korea being 0.12% to 0.13%, the prevalence of 3.5% is stunning. This alarming figure should raise a systematic investigation seeking the possible route of infection and an initiation of education program for the general population on HCV infection and prevention.

The prevalence of HCV seems to vary according to the study population and design since large proportion of HCV infected population is asymptomatic.[3] Kwon *et al*.[2] made use of the National Health Insurance data which naturally included only those who sought the medical assistances and reported the prevalence that is much lower than that of the previous reports. The figure presented by Kwon *et al*.[2] is closer to HCV RNA prevalence among Korean blood donors between February 2005 and December 2009 which reported the prevalence of 0.16%.[4] On the other hands, anti-HCV prevalence among health check-up examinees are reported to be 0.78% to 1.29%.[5,6] Prevalence approximated by anti-HCV positivity tends to be exaggerated since persons with past infection after recovery and with false anti-HCV positive must be included in the figure. However, the most recently performed investigation[6] using serologic data of health check-up participants demonstrated the similar regional variations as the study by Kwon *et al*.[2] Although the figures from anti-HCV positivity study were generally larger than that from the National Health Insurance data, both studies reported Jeonnam and Busan having highest age-adjusted HCV prevalence in South Korea. Being southern coastal part of Korea, no apparent common factors for high HCV infection are noticeable between two regions. Careless contemplation about possible explanation for the higher prevalence without scientific evidences may result in biased opinions on those regions. Instead, epidemiologic studies seeking mode of infections related to the geographical, cultural, and medical factors should be initiated to prevent the further infection. It should be emphasized that although study by Kwon *et al*.[2] only concentrated on evaluating the prevalence, their results on regional variations which is in accordance with the previous study provide a ground for the further investigation on epidemiological study over route of transmission.

Investigating risk factors and mode of transmission for HCV is not a straightforward work since acute HCV infection often passes asymptomatic.[7] Strenuous task it may be, it is a very important especially for an infectious disease where active means of immunization is not feasible. A recent prospective study included 1,173 anti-HCV Ab positive persons and underwent careful survey and data collection processes to identify risk factor in the HCV cohort.[8] The study presented use of illicit intravenous drugs, experiencing needle stick injury, receiving trans-

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fusion before 1995 and tattooing as the meaningful risk factors. These risk factors seem to be similar to that of other parts of the world. However, if Korean cultural health behaviors were to be taken account, risk factors might have been more diverse and valuable. As Kwon *et al*.[2] discussed in their work, residents of a specific part of Korea often undergo a type of phlebotomy called "Buhwang" as alternative medicine. Acupuncture by unlicensed personnel can be another risk factor in Korea.

With Kwon *et al*.[2] validating previous work showing regional variations on HCV prevalence, epidemiologic studies considering the regional culture and habits should ensue in order to develop effective means of counselling for HCV prevention.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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