

論文内容要旨

Effect of COVID -19 on hepatitis B and C virus countermeasures:
Hepatologist responses from nationwide survey in Japan

(COVID-19 パンデミックが B 型・C 型ウイルス肝炎対策に与えた
影響に関する実態把握調査—肝臓専門医を対象とした全国調査—)

Hepatology Research, 52(11):899-907, 2022.

主指導教員：田中 純子教授
(医系科学研究科 疫学・疾病制御学)

副指導教員：久保 達彦教授
(医系科学研究科 公衆衛生学)

副指導教員：服部 登教授
(医系科学研究科 分子内科学)

HUSSAIN MD RAZEEN ASHRAF

(医系科学研究科 総合健康科学専攻)

Background:

Achieving the elimination of Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) requires continuous diagnosis and treatment. Based on the national database (NDB) 2015 of Japan, 1.9-2.5 million carriers of HBV and HCV infection consisting of various stage liver diseases, among them 0.7 million were undiagnosed. The trend of HBV and HCV was expected to decline by 0.9-1.3 million by 2030. However, the ongoing COVID-19 pandemic has been affecting preventive care and treatment of HBV and HCV as reported by the Coalition for Global Hepatitis Elimination, Task Force for Global Health from a global survey in 44 countries. Taking all these into account, this study aimed to determine the substantial effect and response of COVID-19 on hepatitis prevention and treatment in Japan and compare the situation with other countries from the impression of hepatologists (clinicians).

Methods

A cross-sectional questionnaire survey was conducted among the hepatologists affiliated with JSH from August to October 2021. The targeted participants were clinician. The electronic version of the questionnaire was disseminated by e-mail to all the members of JSH. The questionnaire was in both English and Japanese language. The questionnaire was adapted from the global survey of the task force for global health but reconstructed in Japan perspective. The survey areas included (i) delivery of HBV- and HCV-related services during highest impact month of COVID-19, (ii) challenges to resuming services to pre-COVID-19 levels and COVID-19 mitigation strategies, (iii) clinical involvement in the response to COVID-19, and (iv) the potential benefits of the COVID-19 response of the hepatitis system. Chi-squared tests were performed to compare data between the Japanese survey and the global survey, and $p < 0.05$ was regarded as statistically significant.

Results

Total of 196 clinicians participated from 35 prefectures of which 49.5% also held managerial positions and 52.6% were affiliated with university hospitals. During the highest impact month of COVID-19, a 1–25% decline in HBV and HCV screening was reported by 38.8% and 39.8% for, respectively. Similarly, for HBV and HCV confirmatory testing, 43.9% and 43.4% reported between a 1-25% level of decline in volume patient, respectively. The reduction on screening and confirmatory testing indicated missed opportunity to detect undiagnosed cases. However, no decline for HBV, HCV and HCC treatment initiation was reported by 53.6%, 45.4% and 58.2%, respectively. In addition, no decline in volume of patients in monitoring for HBV, HCV and HCC were reported by 47.4%, 45.4% and 60.2% of participants, respectively. This more static response for treatment initiation and patient's monitoring exhibited that once patient diagnosed linked to the care of clinician.

Comparing Japan's situation with global survey results, effect of COVID-19 on HCV screening (Japan:51% vs Global: 70.9%, $p = 0.001$), HBV treatment (Japan:32.7% vs Global: 52.4%, $p = 0.0009$)

and HCV treatment (Japan:41.8% vs Global: 66%, $p<0.0001$) were significantly low in Japan but not in HBV screening was not significant (Japan: 51.1% vs Global: 56.3%, $p=0.3834$).

Patient anxiety and fear (Japan: 67.4% vs. Global:37.9%, $p <0.0001$), loss of staff due to COVID-19 response (Japan: 49.0% vs Global: 17.5%, $p<0.0001$) and limited availability of staff (Japan:46.4% vs Global:6.8%, $p<0.0001$) were major challenges to resume services to pre-COVID-19 level in Japan than other countries. As part of the mitigation strategies in Japan, audio call and extension of prescription were adopted by 55.6% and 59.2% of participants, respectively. Usage of telemedicine in Japan was significant less than other countries (Japan: 67.3% vs Global:75%, $p=0.0001$). Compare with other countries, increased laboratory testing platforms (Japan:17.9% vs Global: 41.8%, $p<0.0001$), improved contact tracing (Japan:13.8% vs 25.2%, $p=0.0136$) and improved surveillance (Japan: 14.3% vs Global: 24.3%, $P=0.0317$) were significantly less reported in Japan as potential benefit of COVID-19 on hepatitis elimination. But strengthening of infectious disease control (45.9%), raising awareness of medical institutions during infectious disease epidemics (44.4%) and improving training in infectious disease testing and management (35.7%) were reported as potential benefits of COVID-19 to hepatitis elimination in Japan.

Conclusion

From the impression of participated medical doctors, the level of decline in hepatitis-related services in Japan was lower than in other countries due to COVID-19 pandemic. However, a 1-25% decline was observed in HBV and HCV screening (HBV: 38.8%, HCV:39.8%) and confirmatory testing (HBV: 43.9%, HCV: 43.4%). No decline in treatment initiation for HBV (53.6%) and HCV (45.4%) was a positive sign to redirect patients after testing to treatment. Immediate action is required on screening and testing to avoid additional disease burden related to hepatitis more than the expected number of 0.9-1.3 million of HBV and HCV carriers by 2030. For this, reported challenges such as anxiety and fear among patients about COVID-19 infection, and the loss of healthcare staff and facilities redirected to the COVID-19 response, must be overcome. In addition, efforts should be made to leverage possible benefits of the COVID-19 response to the national hepatitis program, including improved training of clinicians in infectious disease testing and management, and for medical institutions to raise awareness about dealing with infectious disease epidemics. The use of telemedicine has accelerated worldwide due to the COVID-19 pandemic which Japan should be utilized.