

論文審査の結果の要旨

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学位授与の条件	学位規則第 4 条第①・2 項該当		
論文題目			
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-)			
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〔論文審査の結果の要旨〕			
<p>Background: Achieving the elimination of Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) requires continuous diagnosis and treatment. In 2020, Coalition for Global Hepatitis Elimination (CGHE), a program within the Task Force for Global Health conducted a global survey among 44 countries across the world on the impact of the ongoing COVID-19 pandemic on preventive care and treatment of HBV and HCV. The survey resulted indicated a decline in testing, treatment and services related to HBV and HCV. As Japan was not included in this survey, we conducted a survey in Japan with the support of MHLW in cooperation with CGHE and the Japan Society of Hepatology (JSH).</p> <p>Methods: A cross-sectional questionnaire survey was performed among clinician belonging to the JSH between August and October 2021. The questionnaire was adopted from the CGHE global survey and modified with respect to situation in Japan. The survey covered five topics: (i)basic information, (ii) delivery of HCV-related services during the highest impact month of COVID-19, (iii) challenges and mitigation strategies to resuming services to pre-COVID-19 levels, (iv) clinician responses to COVID-19, and (v) the potential benefits of the COVID-19 on hepatitis care. The questionnaire was distributed both in English and Japanese, and an electronic version of the questionnaire was disseminated by e-mail to all the members of the JSH. The impression of the clinician on questions included in both the global and national survey were compared using the Chi-square test.</p> <p>Results: A total of 196 clinicians from 35 prefectures participated in the survey, among whom 49.5% of the respondents held managerial positions and 52.6% were affiliated with university hospitals. During the highest impact month of COVID-19 in Japan, the percentage of clinicians who reported a 1–25% decline in HBV and HCV screening were 38.8% and 39.8%, respectively. Similarly, 43.9% and 43.4% of respondents reported a 1-25% decline in the volume of patient who underwent confirmatory testing for HBV and HCV, respectively. The reduction on screening and confirmatory testing revealed a missed opportunity to detect undiagnosed cases.</p> <p>However, the percentage of clinicians who reported no decline in treatment initiation for HBV, HCV and HCC were 53.6%, 45.4% and 58.2%, respectively. In addition, 47.4%, 45.4% and 60.2% of clinicians reported no decline in monitoring for HBV, HCV and HCC, respectively. This more stable trend for treatment initiation and patient monitoring indicates that patients were likely to initiate and continue treatment following diagnosis.</p>			

Comparing the result from Japan with those of global survey suggested that the percentage of clinicians who felt a negative effect of COVID-19 on rates of 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 lower in Japan survey.

Regarding challenges to resuming services at pre-COVID-19 levels, the percentage of clinicians who replied, “patient anxiety and fear” was significantly higher in Japan survey than in the global survey(Japan: 67.4% vs. Global:37.9%, $p <0.0001$).

However, 67.3% of clinicians reported using telemedicine at any capacity, which is lower than in the global survey (Global:75%, $p=0.0001$).

On changes to control of infection, the percentage of clinicians who replied, "increase of wearing mask of staff“ (Japan:54.1% vs Global:82.5%, $p<0.0001$) was significantly lower in Japan survey compared with global survey, whereas the rate of those who responded, “increase of wearing masks of patients” (Japan:78.6% vs Global:55.3%, $p<0.0001$) was significantly higher in Japan survey.

Comparing the potential benefits of COVID-19 on hepatitis elimination, the percentage of clinicians who replied, “increased laboratory testing platforms” (Japan:17.9% vs Global: 41.8%, $p<0.0001$) was significantly lower in Japan survey. However, in Japan survey, clinicians most frequently reported other alternatives, such as “strengthening of infectious disease control” (45.9%) and “raising awareness of infectious disease epidemics” (44.4%) as potential benefits of COVID-19 on hepatitis elimination.

Conclusion: In the survey in Japan, around 40% of clinicians reported on a 1-25% decline in HBV and HCV screening and confirmatory testing, while around 45% of clinicians reported no decline in treatment initiation and patient monitoring. However, based on the responses from participating clinicians, the level of decline in hepatitis-related services due to COVID-19 pandemic appears to be lower in Japan than in countries in the global survey.

Therefore, efforts should be made to reduce patient anxiety and fear in the face of COVID-19 in order to restore services to pre-COVID level and to leverage the possible benefits of the COVID-19 response to improve the national hepatitis program through, e.g., strengthening of infectious disease control and increased usage of telemedicine.

In this paper the authors conducted a survey to understand how the COVID-19 pandemic has impacted preventive care and treatment of HBV and HCV against the WHO's goal of eradicating viral hepatitis by 2030. The study compares the results in Japan with respect to the result of the global survey, discusses the urgent need for measures to return to pre-COVID-19 levels of examination, consultation, and treatment, and considers the importance of introducing telemedicine. This is valuable as the first such report in Japan. In addition, these new findings revealed a decreasing trend in HBV and HCV screening in Japan, but not in treatment initiation and patient monitoring, unlike the global survey.

以上の結果から、本論文は、2030年までにWHOが掲げたウイルス肝炎の撲滅への道程に対しCOVID-19パンデミックがHBVおよびHCVの予防ケアと治療に及ぼしたかを把握するために調査を行い、CGHEが行ったGlobal調査の結果と比較・考察し、COVID-19以前の受検・受診・受療レベルに戻るための対策が急務であること、遠隔医療などの導入を視野に入れることが重要であることを示唆した点で本邦初の貴重な報告である。

また、日本の調査では、HBVおよびHCVのスクリーニングで減少傾向があった一方で、Global調査とは異なり、治療開始と患者モニタリングでは減少していない傾向を明らかにした点で評価された。

よって審査委員会委員全員は、本論文が HUSSAIN MD RAZEEN ASHRAF に博士（医科学）の学位を授与するに十分な価値あるものと認めた。