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Editorial

Drug-drug interactions with direct-acting antivirals — less is more

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World Health Organization published the first global health sector strategy on viral hepatitis in June 2016, a strategy that contributes to the proposed targets for the reduction of chronic viral hepatitis incidence and mortality of 90% and 65% respectively by 2030.[1] Now, we are lucky enough to have highly effective direct-acting antivirals (DAAs) for patients infected with hepatitis C virus (HCV), which achieve sustained virologic response in more than 95% of HCV patients.[2] Yet, it remains challenging to achieve micro-elimination in some special populations, namely patients with chronic kidney disease (CKD), and especially those on hemodialysis.[3] On major issue is the potential drug-drug interaction (DDI) between DAAs and the comedications of these patients, which are often a handful in terms of numbers and classes in view of their multiple comorbidities.[4,5]

In the current issue of the *Clinical and Molecular Hepatology*, Hsu and colleagues[6] reported the Taiwanese nationwide cohort of 2,015 hemodialysis patients, among whom 169 patients were screened positive for HCV RNA. The authors described in much details the comedications and their potential DDIs with DAAs. Interestingly, lipid-lowering agents, which were used in more than one-third of patients, accounted for the majority of red-category DDIs. Elbasvir/grazoprevir was found to be the DAA regimen with fewest potential DDIs (0.3% only), whereas the triple therapy sofosbuvir/velpatasvir/voxilaprevir had the most (5.6%).[6] The latter was not surprising as there are three DAA agents, instead of two in most other cases, in this regimen.

The findings of this study are of clinical importance as it may guide us to select the most suitable DAA regimens for our hemodialysis patients. This is a crucial part of HCV elimination as it would minimize the risk of nosocomial transmission of HCV in dialysis centres.[7] This is particularly true for the treatment of hemodialysis patients who get acute hepatitis C as the treatment window is limited.[8] While elbasvir/grazoprevir is suitable for patients CKD infected with genotype 1 HCV, glecaprevir/pibrentasvir is another option for CKD patients with the advantage of its pangenotypic efficacy.[9] An detailed implantation guideline for managing HCV infection in CKD patients was published earlier this year to provide more specific guidance.[10]

Another difficult-to-treat special population would be people

Abbreviations:

CKD, chronic kidney disease; DAAs, direct-acting antivirals; DDI, drug-drug interaction; HCV, hepatitis C virus

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who inject drugs, as they often receive opioid substitute therapy and also many other comedications.[11] The current study by Hsu et al.[6] has also provided important data to support the preferred DAA regimens which may minimise the DDIs. To achieve HCV elimination, a simplified DAA regimen with minimal DDIs would be an important tool.

Conflicts of Interest

The author has no conflicts to disclose.

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