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2023-02

Vuorio , A , Raal , F & Kovanen , P T 2023 , ' Drug-drug interaction with oral antivirals for the early treatment of COVID-19 ' , International Journal of Infectious Diseases , vol. 127 , pp. 171-172 . <https://doi.org/10.1016/j.ijid.2022.11.039>

<http://hdl.handle.net/10138/356277>

<https://doi.org/10.1016/j.ijid.2022.11.039>

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Letter to the Editor

Drug-drug interaction with oral antivirals for early treatment of COVID-19 – Authors' reply


I thank Vuorio et al. [1] for their very relevant concerns and comments on the Danish population-based study estimating the risk of significant drug-drug-interactions (DDIs) with the oral antiviral nirmatrelvir/ritonavir in the elderly Danish population [1,2].

The study showed that simvastatin or lovastatin was used by 15.45 % of people ≥ 65 years and 17.70 % of people ≥ 80 years [2]. Coadministration of simvastatin or lovastatin with ritonavir is contraindicated, as ritonavir increases the concentration of these statins 100-fold with risk of severe toxicity, including rhabdomyolysis [3,4]. In cases where coadministration of nirmatrelvir/ritonavir with a drug is contraindicated, there are three options either pause the drug, replace the drug, or consider another antiviral treatment for early COVID-19 [5]. Obviously, this decision should be based on an individual basis, considering the risks and benefits.

Concerning the treatment of patients taking simvastatin or lovastatin with nirmatrelvir/ritonavir, most international guidelines and the Danish national guideline recommend withholding these drugs during and at least 2-3 days after treatment [3,6,7,8]. In general, temporarily pausing statins during early treatment of COVID-19 will, in most cases, not cause any clinical harm but will reduce the risk of toxicities due to DDIs [4,5]. The meta-analysis by Wu et al. [9] shows that statins improve the outcome of COVID-19, including patients with severe COVID-19, with the main outcome being the need for intensive care and death. This is not the target population for treatment with nirmatrelvir/ritonavir, which is used for early treatment of COVID-19.

I do not question that statins used for primary prevention reduce the risk of major vascular events, nor that an option is to replace simvastatin or lovastatin with pravastatin or fluvastatin. However, the pragmatic approach is to pause any statins during treatment. Although being an infectious disease specialist, I doubt that withholding statins for 8 days will expose the patients to a significantly increased risk of major cardiovascular events.

Declaration of competing interests

The authors have no competing interests to declare.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Ethical approval

Not applicable.

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Revised 28 November 2022