EClinicalMedicine 19 (2020) 100272

Contents lists available at ScienceDirect

EClinicalMedicine

journal homepage: https://www.journals.elsevier.com/eclinicalmedicine

Letter

HIV drug resistance and antiretroviral therapy programs in Henan, China-authors' reply

Lulu Zuo[a,c], Jianru Qin[b,c], Qinggang Xu[a], Chiyu Zhang[c,*]

[a] Institute of Life Science, Jiangsu University, Zhenjiang 212002, China
[b] College of Life Sciences, Henan Normal University, Xinxiang 453007, China
[c] Pathogen Discovery and Evolution Unit, Institute Pasteur of Shanghai, Chinese Academy of Sciences, Shanghai 200031, China

We appreciate the Letter by Liu and colleagues that concerns our recent work [1] and details the evolution of antiretroviral therapy programs in Henan, the worst province affected by HIV/AIDS in Central China. According to Liu et al., the DDI was gradually replaced by 3TC in first-line ART regimens in Henan during 2012–2016. Therefore, compared to other regions of China, Henan had a relatively short period of access to 3TC, which may explain why Central China had worse status of HIV-1 drug resistance, but lower prevalence of intermediate- and high-level of resistance to 3TC/FTC in ART-treated individuals.

M184V/I is a major resistance mutation to cause intermediate- and high-level of resistance to 3TC/FTC [2]. The relatively short period of use of 3TC can also explain low proportion of M184V/I in ART-treated individuals in Central China [3]. In view of complete coverage of access to 3TC in Henan since 2016, it is predictable that M184V/I prevalence will increase regardless of in ART-naïve and ART-treated individuals as observed in other regions of China. An increasing trend of M184V/I prevalence in ART-treated individuals had been observed in several recent studies conducted in Henan province [3,4].

Given the rapidly increasing trend of TDR in Central China [1], scale-up of routine pretreatment drug-resistance testing, as well as routine viral load (VL) testing once per year, and appropriate increase of the frequency of the VL testing especially in the first two years will be very important as an early response to HIV-1 drug resistance to 3TC and other antiretroviral drugs [5].

Declaration of Competing Interest

The authors have nothing to disclose.

Funding

This study was supported by grants from the National Natural Science Foundation of China (81672033 and U1302224), and the Open Research Fund Program of the State Key Laboratory of Virology of China (2019IOV002).

References

[1] Zuo L, Liu K, Liu H, et al. Trend of HIV-1 drug resistance in China: a systematic review and meta-analysis of data accumulated over 17 years (2001–2017). E Clinical Medicine 2020;18:100238. doi: 10.1016/j.eclinm.2019.100238.
[2] Rhee SY, Jordan MR, Raizes E, et al. HIV-1 drug resistance mutations: potential applications for point-of-care genotypic resistance testing. PLoS ONE 2015;10:e0145772.
[3] Liu J, Yan J, Yang W, et al. Analysis of HIV-1 drug resistance among 1 922 individuals experiencing virological failure of first-line antiretroviral therapy in Henan province (In Chinese). Zhonghua Yu Fang Yi Xue Za Zhi 2015;49:950–5.
[4] Liang Y, Yang WJ, Sun DY, Li N, Wang Z. Survival analysis on former plasma donors living with HIV/AIDS after initiation of antiretroviral therapy in Henan province, 2002-2017 (In Chinese). Zhonghua Liu Xing Bing Xue Za Zhi 2019;40:638–42.
[5] Gupta S, Neogi U. Following the path: increasing trends of HIV-1 drug resistance in China. E Clinical Medicine 2020;18:100251. doi: 10.1016/j.eclinm.2019.100251.

DOI of original article: http://dx.doi.org/10.1016/j.eclinm.2019.100238, http://dx.doi.org/10.1016/j.eclinm.2020.100275.
* Corresponding author.
E-mail address: zhangcy1999@ips.ac.cn (C. Zhang).

https://doi.org/10.1016/j.eclinm.2020.100272