Increased Risk of Renal Stones in Patients Treated With Atazanavir

TO THE EDITOR—We read with much interest the recent study of Hamada et al on the incidence of renal stones among human immunodeficiency virus–infected patients on ritonavir-boosted atazanavir (ATV/r) [1]. Although their study was limited by its design (retrospective monocentric), the authors convincingly demonstrated that ATV/r use is a strong and independent risk factor for clinically significant renal stones. However, 3 limitations were not addressed in the discussion. First, given that >70% of patients in the “other protease inhibitors [PIs] group” were receiving ritonavir-boosted lopinavir (LPV/r), the authors’ conclusion that “the incidence of renal stones is substantially higher among patients in the ATV/r group, compared with patients in the other PIs group” only applies to the comparison of renal stones incidence between patients receiving ATV/r and those receiving LPV/r. For the other PIs, sample sizes do not allow such a conclusion. Second, the median observation period was 8 months longer for patients receiving ATV/r (31.0 months; interquartile range [IQR], 15.0–48.7), than for patients receiving other PIs (23.0 months; IQR, 10.3–42.4). Given that the median time from the commencement of antiretroviral treatment to the diagnosis of renal stones was 24.5 months (IQR, 14.7–34.6), the longer observation period for patients receiving ATV/r probably overestimated the increased risk of renal stones in this group. Last, although the authors included only patients receiving ritonavir-boosted ATV in the “ATV group” (inclusion criteria), patients treated with unboosted PIs could be included in the “other PIs group”: By increasing drug exposure, ritonavir boosting is likely to increase the risk of drug-related renal stones, whatever the companion PI. Hence, allowing unboosted PI in one arm, and not in the other, may also result in an overestimation of the increased risk of renal stones associated with the use of ATV, as compared to other PIs. That being said, Hamada et al are to be commended for the clever design of their monocentric study: Although the magnitude of the effect of ATV on the risk of renal stones may have been somewhat overestimated, their conclusion is robust, and adds another brick in the wall, supporting previous reports that ATV is associated with an increased risk of clinically significant renal stones [2] and cholelithiasis [3].

Note

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