Transient Sick Sinus Syndrome related to Lopinavir-Ritonavir in a patient with AIDS

Santosh Chaubey¹, Ashim Sinha¹, Darren Russell²,³, Henrik Falhammar¹,⁴

1. Department of Medicine, Cairns Base Hospital 2. Cairns Sexual Health Service 3. University of Melbourne 4. Department of Molecular Medicine and Surgery, Karolinska Institute

A 42-year-old northern Thai man who recently migrated to Australia developed transient sick sinus syndrome soon after institution of treatment with Kaletra (lopinavir/ritonavir) and Kivexa (abacavir/lamivudine) is presented. His most recent CD4 count was 390 cells/l, and he was taking no other medications, nor any herbal medicines. He presented with dizziness to the Emergency Department after 3 doses of Kaletra (and 2 of Kivexa). There was no history of any cardiac conditions and the only other history of note is a positive VDRL test, and Herpes Zoster 6 months ago.

On admission he was bradycardic with pulse rate of 42/minute. His ECG demonstrated sinus arrest with junctional escape rhythm which later changed into atrial fibrillation followed by sinus bradycardia. Three days after stopping his medications he reverted to normal sinus rhythm. To our knowledge only 4 similar cases have been described in the literature, and 3 occurred in Japanese individuals. All of these cases were associated with the introduction of lopinavir/ritonavir. In contrast to our patient, however, all of the previously described cases were on various other medications apart from antiretrovirals, and the mechanism of cardiac conduction defects with these agents has not yet been elucidated.

Our case occurred in a man who is HLAB57-negative, and it is proposed that lopinavir/ritonavir is the cause of this man's sinus arrhythmia.

Even though the numbers of affected individuals are small, 3 out of 4 individuals were of Asian origin which raises the question about genetic propensity to this particular manifestation of this particular combination of antiretroviral (lopinavir/ritonavir).