

P143 **MEDICATION REVIEWS FOR PEOPLE LIVING WITH HIV (PLWHIV)**

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Background As people are living longer with HIV, patients present with multi-morbidities and polypharmacy. To reduce the risk from drug-drug interactions, the multi-disciplinary team within our large city centre sexual health centre, carry out medication reviews for patients with polypharmacy (classed as >5 drugs excluding anti-retrovirals) on an ad-hoc basis. This audit aims to identify the proportion of HIV patients who have had a documented medication review (DMR) in the past 15 months and to re-audit following introduction of a service improvement to ensure that 90% of our patients have a DMR prior to clinician appointments.

Methods Study samples were obtained from a randomly selected week of booked HIV clinic appointments. Data was collected from electronic patient records for a look back period of 15 months.

Results In the initial audit, from a study sample of 203 PLWHIV, 29% of the total population and 21% of those with polypharmacy had a DMR. 39 interactions were identified, three minor and 36 significant. All 39 interactions required an intervention. The re-audit had a study sample of 180 PLWHIV, 94% of the total population and 97% of those with polypharmacy had a DMR. 135 interactions were identified, 113 minor and 21 significant. 121 of these interactions required an intervention.

Conclusion The combination of anti-retroviral treatment with polypharmacy significantly increases the chance of potentially serious drug-drug interactions. To deliver safe and effective patient care and to ensure we are minimising the risk of adverse drug events as a result of these interactions, it is essential that a medication review is carried out for all our patients, ideally with every change in treatment but at the very least, every 15 months to meet national standards. Subsequently, our pharmacy team are completing medication reviews for each patient, prior to clinician appointments, supporting patients to get the most from their medicines.

Disclosure No significant relationships.

P145 **AN INTRA-FAMILIAL TRANSMISSION OF HIV-1 CRF02_AG WAS RECONSTRUCTED BY MOLECULAR EPIDEMIOLOGY**

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Background Mother to child transmission (MTCT) plays an important role in children HIV infection, and in China, about 0.1% to 0.4% individuals were infected through MTCT. Nucleic acid amplification testing was powerful tool to assess the effect of prevention of MTCT, mainly by qualification NAT. Here, we described an intrafamilial transmission event by molecular epidemiology.

Methods A pregnant woman with seroconversion during pregnant healthcare was followed up by epidemiology

survey, together with her husband and newborn. Viral RNA was extracted for the amplification of HIV-1 gag gene and pol gene fragments with One-step RT-PCR. The positive PCR products were subject to DNA sequencing. The sequences of gag gene and pol gene were codon-based aligned and analyzed with MEGA 6.0 to construct neighbor-joining tree, respectively. The genotypic drug resistances were interpreted by Stanford University HIV drug resistance database.

Results The proband was the pregnant woman, with seroconversion of anti-HIV-antibody screening by Wantai HIV-1/2 Ab kit during pregnant healthcare. Afterward, her husband and son at age of eight months were diagnosed as HIV-1 infection by HIV-1 antibody screening and RT-PCR, respectively, although her son was RT-PCR negative one day after birth. Neighbor-joining (NJ) tree indicated that the three individuals were infected by HIV-1 CRF02_AG, forming a close subcluster with high genetic homogeneity (bootstrap value, 95%). The sequences from the husband were closer to the root or the ancestor of the tree, and the topology structure indicated the transmission timing and evolution relationship, from father to mother and child, as shown by seroepidemiology.

Conclusion An intra-familial transmission of HIV-1 CRF02_AG was reconstructed by molecular epidemiology and the possible transmission relationship was elucidated. Contagious diseases screening should be reinforced during healthcare before marriage or pregnancy-deliver. Prevention of mother-to-child transmission should be timely and efficiently administered upon diagnosis of infection in pregnant women, to avoid the secondary intra-familial transmission and improve the population quality at birth.

Disclosure No significant relationships.

P148 **TRANSCONTINENTAL DISSEMINATION OF THE MAJOR HIV-1 CRF01_AE LINEAGES CIRCULATING IN CHINA**

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Background While HIV-1 CRF01_AE has caused a large epidemic in Mainland China, and distinct lineages related to transmission among various high-risk populations have been identified, whether its transmissions have dispersal outside remains poorly understood. We aimed to characterize and quantify the genetic relationship of HIV-1 CRF01_AEs circulating in Mainland China and in other countries globally.

Methods Phylogenetic and molecular clock analyses were carried out for all available CRF01_AE pol sequences deposited in two databases (the Los Alamos HIV sequence database and the UK HIV Drug Resistance Database) to characterize the possible linkages between CRF01_AE variants in Mainland China and the rest of the world.

Results We found that all five major lineages associated with the transmission in Mainland China were detected in the rest of the world, as following the Vietnam (n=228), Kingdom (n=48), Japan (n=18), Hong Kong (n=6), Czech Republic