



INVITED SPEAKER PRESENTATION

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# Diffusion of new antiretroviral drugs in CSF

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An aim of the presentation will be to review the relative importance of ARV penetration into the central nervous system (CNS) for optimizing virological response and minimizing cognitive deficits. A brief summary of clinical studies addressing the importance of ARV penetration will be included. A focus of the discussion will be on pharmacological factors driving CNS penetration (e.g. protein binding, lipophilicity and interaction with membrane transporters). The talk will summarize current knowledge for the most widely prescribed ARVs. Methodological approaches will be discussed in that studies addressing CNS penetration often rely on sparse PK measurements within the cerebrospinal fluid (CSF) coupled with population PK modelling. Few studies include intensive pharmacokinetic (PK) measurements in both CSF and plasma for estimating the CSF/plasma exposure ratio. Pharmacodynamic studies assessing the importance of CSF PK exposure for virological response will be reviewed with an emphasis on the newer ARVs including raltegravir. Raltegravir achieves CSF concentrations providing adequate HIV inhibition in the majority of patients. Results for additional new ARVs will also be presented.

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