

11th International Virology Summit

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7th World Congress on **Control and Prevention of HIV/AIDS, STDs & STIs**

July 01-02, 2019 Valencia, Spain



Vsevolod A Zinserling

Saint-Petersburg University, Russia

HIV Infection and its complications from pathologist's point of view

HIV infection remains one of the most dangerous diseases and important causes of death. Numerous investigations are devoted to problems of epidemiology, molecular biology, treatment, psychology etc. The number of studies discussing the results of pathological studies is very limited. Having long term experience in HIV pathology, we can formulate the following items. Most important questions to be studied on the autopsies of the deceased from HIV-infection: exact list of secondary infections and tumors with specification of their localization; evaluation of the efficacy of treatment; revealing of immediate death cause; collection of specimen for further investigations in order to study the mechanisms of the disease and its complications. Methods recommended for postmortem investigation are detailed histological study of all macroscopically changed and not changed organs with use of certain special staining; bacteriological and mycological investigation of all suspected lesions in order to clarify their etiology and certain properties of the pathogens; different virological, molecular-biological methods and immunohistochemistry in order to study the localization of lesions due to HIV and other viruses and some of their properties. Among the most interesting, important and not sufficiently known changes we pay special attention to the brain. We have to distinguish direct and indirect lesions due to HIV virus itself, other pathogens (CMV, Toxoplasma, Cryptococcus, HSV, JCV, EBV first of all) and other influences and follow up them in different decades of epidemics. Some clinico-pathological correlations in perinatal HIV: viral load in pregnant women correlated with the depth of immunosuppression; women without antiretroviral treatment had more expressed grade of immunosuppression; frequency of secondary purulent inflammation correlated with the grade of immunosuppression. Main probable pathogenic mechanisms of Placenta lesion in HIV: direct lesions of placenta macrophages (Hofbauer cells), endotheliocytes and decidual cells with development of typical changes of nuclei, leading role in inflammatory reaction of CD14+ in comparison with CD68+ cells; disturbance of angiogenesis due to hyper expression of anti-angiogenic factor TGF β ; probable disturbances of syncytial-capillary membrane. Main questions for further investigations: clarifying incidence and etiology of placenta inflammation and intrauterine infections in women with HIV; further studies of mechanisms of placenta lesions in HIV infected women; clinico-pathological correlations between morphological changes in placenta and outcome of pregnancy versus antiretroviral treatment; Clinico-pathological correlations between symptoms in children from HIV-infected mothers and post-mortem histology; studying impact of prenatal infections on development of children and morbidity of teenagers and adults. Question for the life-time pathological and cytological diagnostics are study of smears or liquid biopsies of cerebrospinal fluid for evaluating mycobacterium, cryptococci and tumour cells, lymph node biopsies in order to identify the origin of their lesion, needle biopsies of other organs due to clinical necessity.

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Biography

Vsevolod A Zinserling is pathologist working in the field of infectology in Saint-Petersburg, Russia. His research is devoted to viral, bacterial, fungal and mycoplasma lesions of brain, lung, liver, intestine, placenta on autopsy, clinical and experimental material. Investigations of pathomorphology of Influenza, HIV and its complications, infections due to herpes viruses, viral hepatitis, mixed infections of different localisation are of special interest. Prof. V.A. Zinserling is collaborating at Saint-Petersburg University, Center of infectious pathology at S.P. Botkin hospital for infectious diseases and department of pathomorphology in the Institute of Experimental medicine at National Medical Research Center named after V.A. Almazov. He is active member of European Society of Pathology (working groups infectious diseases, autopsy pathology and history of pathology). Author of more than 400 publications.

zinserling@yande.ru

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