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High level drug resistance in patients on chronic antiretroviral treatment presenting with oropharyngeal candidiasis in Kenya

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Objectives: The aim of this study was to determine antiretroviral drug resistance patterns in patients on chronic HAART presenting with OPC.

Methods: An exploratory survey was performed among HIV-infected patients on HAART for minimum of 24 months presenting with OPC in Nairobi, Kenya. Type (pseudomembraneous or erythematous candidiasis, angular cheilitis) and previous episodes of OPC, CD4-cell counts, duration, regimen and adherence on HAART were compared between patients with detectable (>1000copies/ml) and undetectable HIV-RNA levels. Genotypic resistance testing was performed on those with detectable viral loads.

Results: Out of (n=45) patients with OPC, (n=28; 62%) had detectable HIV-RNA levels. The (n=28) patients who mostly presented with pseudomembraneuos candidiasis (n=26; p<.0001), had significantly more previous episodes of OPC (55% versus 18%; P<0.0373) lower median CD4 cell counts (74 versus 521; P<.0001) and higher HIV-RNA median plasma levels (111,191 copies/ml versus <20; P<.0001). The sensitivity (0.96) and specificity (0.87) of pseudomebraneous candidiasis to predict virological failure was high.

HIV genotyping performed in 22 of the 28 patients showed that most (18/22) had drug resistance mutations of which 12/18 had Lamivudine-associated M184V mutation, 14/18 had TAMS and 16/18 had NNRTI mutations. One patient had major PI mutations.

Conclusion: Virological failure and drug resistance mutations including TAMs should be suspected in patients on chronic HAART that present with pseudomembraneous candidiasis. We propose to include recurrent OPC in the WHO clinical criteria for HAART failure as well as to establish clinical training sessions to build competences among health care providers.

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Attacking HIV-1 reservoirs with viral mutagens

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Multiple therapeutic approaches are being investigated towards eradicating viral reservoirs towards a cure to HIV-1 infection. Our current studies have been directed towards the discovery of viral mutagens that can eliminate the infectivity of reactivated virus through elevation of mutational load. We have found that 5-azacytidine and the combination of decitabine and gemcitabine work as potent viral mutagens and progressed in the preclinical evaluation of these antiretroviral strategies. We have discovered new antiretrovirals that also have potential for such therapeutic applications, which will be discussed.

Biography

LuiseMansky is Professor and Director of the Institute for Molecular Virology, University of Minnesota. He received his PhD degree in Molecular Virology from Iowa State University and was a postdoctoral fellow in the laboratory of Dr. Howard Temin at the McArdle Laboratory for Cancer Research, University of Wisconsin-Madison.

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