
Fungal Colonization of Crevicular and Marginal Gingiva in HIV-Infected Children: A Clinicopathologic Study. C Flaitz*, J-W Chen, B Wullbrandt, J Sexton, J Hicks. University of Texas Health Science Center-Houston Dental Branch, Houston, TX.

Fungal-induced soft tissue lesions in the oral cavity of HIV-infected children and adults are commonplace. Crevicular and marginal gingiva adjacent to carious teeth and dentinal caries may harbor fungal organisms, increasing the risk for oral candidiasis (OC), angular cheilitis (AC) and linear gingival erythema (LGE). This study evaluated fungal colonization of crevicular and marginal gingiva attached to extracted carious teeth from Romanian orphaned children with and without HIV infection. 56 HIV-infected and 24 HIV-negative orphaned children underwent dental examination and treatment. Demographic information and medication history were obtained. Prevalence of OC, AC and LGE were determined by an oral pathologist. Non-restorable carious teeth were extracted and formalin-fixed. Incidental adherent crevicular and marginal gingiva was removed for histopathologic evaluation of fungal colonization (H&E, GMS). Microscopic gingival colonization, HIV infection status, gender, antiretroviral medication history, and presence of OC, AC, and LGE were analyzed (Chi-Square, Logistic Regression). The mean age and gender ratio were similar for HIV-infected (11.5yr, 0.9M:1.0F) and for HIV-negative (11.8yr, 1.2M:1.0F) children. Gingival colonization was found in 71% of HIV-infected and 28% of HIV-negative children ($P<0.01$). Fungal-induced lesions with HIV-infected children were 55% OC, 36% LGE and 20% AC, with only 32% lacking clinical evidence of oral fungal infection. HIV-negative children did not have any oral fungal infections ($P<0.01$). With HIV-infected children, 66% were on antiretroviral medications, and this was associated with a reduced prevalence of clinical fungal infection ($P<0.05$). Crevicular and marginal gingiva adjacent to grossly carious teeth may become colonized in a considerable proportion of HIV-infected children, act as a fungal organism reservoir, and promote the development of oral candidiasis, angular cheilitis and linear gingiva erythema. Prevention and restoration of dental caries in HIV-infected children may be helpful in reducing the prevalence of fungal-associated oral lesions. (Supported in part by World Vision)