Acute cytomegalovirus infection is associated with increased frequencies of activated and apoptosis-vulnerable T cells in HIV-1-infected infants.

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Abstract:
Cytomegalovirus (CMV) coinfection is associated with infant HIV-1 disease progression and mortality. In a cohort of Kenyan HIV-infected infants, the frequencies of activated (CD38(+) HLA-DR(+)) and apoptosis-vulnerable (CD95(+) Bcl-2(-)) CD4(+) and CD8(+) T cells increased substantially during acute CMV infection. The frequency of activated CD4(+) T cells was strongly associated with both concurrent CMV coinfection ($P = 0.001$) and HIV-1 viral load ($P = 0.05$). The frequency of apoptosis-vulnerable cells was also associated with CMV coinfection in the CD4 ($P = 0.02$) and CD8 ($P < 0.001$) T cell subsets. Similar observations were made in HIV-exposed uninfected infants. CMV-induced increases in T cell activation and apoptosis may contribute to the rapid disease progression in coinfected infants.