Mucosal and plasma IgA from HIV-exposed seronegative individuals neutralize a primary HIV-1 isolate.

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Abstract

OBJECTIVE:
To characterize functional properties of HIV-specific IgA in samples representing both systemic and mucosal compartments of HIV-1 highly exposed persistently seronegative (HEPS) individuals.

METHODS:
IgA was purified from plasma and mucosal samples from HEPS individuals and tested for the ability to neutralize infection of peripheral blood mononuclear cells (PBMC) by a non-syncytium inducing HIV-1 (clade B) primary isolate. None of these individuals had measurable HIV-1-specific IgG.

RESULTS:
HIV-1-specific neutralizing activity of the purified IgA from plasma (n = 15), saliva (n = 15) and cervicovaginal fluid (CVF) (n = 14) were found in the majority of samples (73, 73 and 79%, respectively). In contrast, plasma, saliva and CVF samples of low-risk, uninfected HIV-seronegative individuals lacked neutralizing IgA, with the exception of two out of 34 (6%) saliva samples.

CONCLUSION:
Mucosal and plasma IgA from HEPS individuals can neutralize HIV-1 infection.

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