Association Between Plasma Antibody Responses and Risk for Cryptococcus-Associated Immune Reconstitution Inflammatory Syndrome

Yoon, Hyun Ah
Nakouzi, Antonio
Chang, Christina C.
Kuniholm, Mark H.
Carreño, Leandro J.
Wang, Tao
Ndung'u, Thumbi
Lewin, Sharon R.
French, Martyn A.
Pirofski, Liise Anne

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Background. Initiation of antiretroviral therapy (ART) in human immunodeficiency virus (HIV)-infected individuals with cryptococcal meningitis places them at risk for Cryptococcus-associated immune reconstitution inflammatory syndrome (C-IRIS). The relationship between antibody immunity and C-IRIS risk has not been investigated. Methods. We compared plasma levels of immunoglobulins, C. neoformans glucuronoxylomannan (GXM) capsule-specific and laminarin (Lam)-binding IgM and IgG, and percentages of peripheral blood total and memory B cells between 27 HIV-infected patients with CM who developed C-IRIS and 63 who did not, and evaluated associations of these parameters with risk of C-IRIS. Results. Prior to initiation of ART, plasma IgM, Lam-binding IgM (Lam-IgM), Lam-IgG, and GXM-IgM levels were significantly lower in patients who developed C-IRIS than those who did not. Multivariate analysis revealed significant inverse associations between C-IRIS and IgM (P = .0003)