

Título: IMMUNOGENETIC FACTORS LIMITING HIV-1 TRANSMISSION IN MEN WHO HAVE SEX WITH MEN FROM MEDELLÍN, COLOMBIA

DESCRIPCIÓN

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Resumen Ejecutivo: Persons who remain uninfected despite repeated unprotected sexual exposure to HIV-1, known as HIV-1-exposed seronegative (HESN) individuals, are an important cohort to study for insights into the mechanisms of protection against HIV-1 infection. The men who have sex with men (MSM) group represents a suitable cohort for HESN individuals, exhibiting an increased risk to transmit or become infected, thanks to their high prevalence of HIV, lack of knowledge of the HIV status, social discrimination and substance abuse. Considering that the probability of HIV-1 transmission per coital act has been reported to be less than 0.001, HESNs might be a consequence of a random situation. Nevertheless, in the last 20 years several cohorts of HESNs have been characterized, and different factors associated with protection have been reported, including delta 32 mutation in the CCR5 gene, HLA genotype and KIR alleles, as well as, soluble factors with antiviral activity produced by different immunological cells in mucosal tissue, plus HIV-1 specific immune responses and immune quiescence phenotype. However, these mechanisms do not fully explain the resistance to acquire HIV infection in all cohorts of HESNs, indicating the existence of other unknown protective mechanisms, genetic specific trait or of interactions among the already described protective mechanisms that have not been explored. In particular, immunogenetic factors in the Colombian MSM group have not been evaluated. Increasing the knowledge of the mechanisms involved in natural resistance during HIV-1 exposure, will allow a deeper understanding of the HIV pathogenesis, leading to the development of new therapeutic strategies for this elusive disease; finally, this study will allow to establish and sustain an infrastructure for recruitment, management and specimen acquisition from MSM in Colombia.