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Having certain type of herpes virus antibodies linked with form of diabetes in sub-Saharan Africans

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Researchers have found an association between the presence of antibodies for the virus human herpesvirus 8 (HHV-8) and an atypical form of type 2 diabetes in persons from sub-Saharan Africa, according to a preliminary study in the June 18 issue of *JAMA*.

Since 1987, an atypical type of diabetes has emerged as one of the most frequent forms of diabetes in populations of African origin, ketosis-prone type 2 diabetes mellitus (DM-2). Ketosis is the condition of having ketone bodies (byproducts of fat metabolism) build up in body tissues and fluids. This type of diabetes is characterized by sudden onset, suggesting there may be triggering factors, according to background information in the article.

"In this study, we hypothesized that ketosis-prone DM-2 may be associated with a viral infection, which may also be the acute and reversible precipitating phenomenon. Indeed, viruses may induce both insulin resistance and insulin secretory defect," the authors write. "Because of the acute onset of ketosis-prone DM-2 and the high prevalence of ketosis-prone DM-2 in populations of African origin, we searched for a virus that is commonly found in this population." HHV-8 is endemic in sub-Saharan Africa with 30 percent to 60 percent of adults having markers of HHV-8 infection.

Eugène Sobngwi, M.D., Ph.D., of Hôpital Saint-Louis, Paris, and

colleagues tested the hypothesis that HHV-8 infection is associated with ketosis-prone DM-2. The study was conducted at Saint-Louis University Hospital in Paris from January 2004 to July 2005. All participants were black and of African origin: 187 were diabetic patients of whom 81 had ketosis-prone DM-2 and 106 had non-ketotic DM-2, and an additional 90 individuals were non-diabetic control participants who were matched for age and sex. The presence of HHV-8 in genomic DNA was investigated in 22 of the participants at clinical onset of diabetes.

HHV-8 antibodies were found in 71 patients (87.7 percent) with ketosis-prone DM-2 vs. 16 patients (15.1 percent) with non-ketotic DM-2, and 36 of the control participants (40.0 percent). HHV-8 in genomic DNA was present in 6 of 13 patients with ketosis-prone DM-2 tested at acute onset and in 0 of 9 patients with non-ketotic DM-2.

"Our preliminary study shows a strong link between ketosis-prone DM-2 phenotype and markers of HHV-8 infection. Patients with ketosis-prone DM-2 have a very high prevalence of HHV-8 infection, whereas patients with non-ketotic DM-2 have a much lower prevalence of HHV-8 infection when compared with the background population. Thus, the prevalence of HHV-8 seropositivity is almost 6-fold higher in patients with ketosis-prone DM-2 compared with non-ketotic DM-2 patients," the authors write.

"These results need to be replicated in other populations and longitudinal studies are required to understand the clinical significance of these findings."

Source: JAMA and Archives Journals