



Role of virus infections in the pathogenesis of insulin-dependent diabetes

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Insulin-dependent diabetes (or Type 1 diabetes; T1D) is a chronic disease arising primarily in genetically predisposed children. It is caused by the slow destruction of pancreatic insulin-producing cells and requires lifelong insulin treatment. Surprisingly, although its incidence is steadily increasing in developed countries, the cause of T1D is still unknown. Although several environmental factors have been implicated, it has been hypothesized for some decades that viral infection may be linked to the early stages of diabetes. More specifically, enteroviruses (EVs), among others, are considered some of the strongest candidates for this role. This seminar will summarize our research on these pathogens in diabetic patients compared to controls. While our data do not prove a causal relationship between EV infections and diabetes, the high prevalence of EV sequences in the early stages of the disease and family cases indicate that different EVs represent a significant biomarker of T1D. I will also discuss the possible role of other viruses recently associated with T1D.

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