

## Enteroviral meningitis and emergence of rare enterovirus types: Cuban experience

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**Viral or aseptic meningitis, which is the most common type, is caused by an infection with one of several types of viruses. About 90% of cases of viral meningitis are caused by members of a group of viruses known as enteroviruses, such as coxsackieviruses and echoviruses. This study describes temporal trends of reported enteroviruses traditionally associated with meningitis in Cuba during 1972-2004, discusses on changing in circulating Enterovirus serotypes associated to meningitis in Cuba, and to speculate about the factors influencing Enterovirus emergence. From 1972 to 2004, nine large meningitis outbreaks caused by an enterovirus occurred: EV4 (1972 and 1985-86), CVB5 (1976 and 1995), CVA9 (1990-1991), EV30 (1994 and 2001), EV9 (1999), EV16 (2000). Other enteroviruses (coxsackievirus and numerous echoviruses) were identified from sporadic cases of viral meningitis during nonepidemic periods. It is remarkable that EV16 emerged as a predominant strain of enterovirus associated with aseptic meningitis in Cuba in 2000. The epidemic shifted temporarily and geographically and elevated frequency of EV16 isolation was limited to Cuba. However, it should be noted EV13 widespread dissemination was reported in U.S, Europe and Asia during 2000, when EV13 was associated for the first time with outbreaks of aseptic meningitis in different countries. The emergence of rare enterovirus types associated with meningitis is of global interest because of the understanding it may provide for the increase in emerging and re-emerging viral diseases worldwide. The future about enterovirus meningitis outbreak is hard to predict and we are going to have to be prepared to confront the unexpected.**