

Abstract

Circulation of Toscana Virus in a Sample Population of Corsica, France [†]

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Abstract: Sandfly-borne phleboviruses pathogenic to humans, such as Toscana virus (TOSV) and sandfly fever Sicilian virus (SFSV), are endemic in the Mediterranean region. In France, several autochthonous cases of TOSV infection have been described which cause either meningitis or encephalitis. The aim of the present study was to estimate the seroprevalence of TOSV and SFSV antibodies in a healthy population from Corsica. In this cross-sectional study, participants were enrolled from the medical staff at University of Corsica Pasquale Paoli (UCPP) and from general practitioners of the Corsican Sentinelles Network. The seroprevalence study was based on virus microneutralization (MN). A total of 240 patients were tested for TOSV and SFSV. Altogether, 54 serum samples were confirmed for TOSV infection (seroprevalence = 22.5%). None of the samples were positive for SFSV (0/240). The main place of residence was significantly associated with TOSV seropositivity (p -value = 0.005). The overall rate of TOSV antibody seroprevalence observed in our study suggests a more intense circulation of TOSV in Corsica, with a rate significantly higher than the 8.7% reported in Corsica in 2007 from blood donors. The absence of seropositivity to SFSV seems to confirm the low circulation of this virus in Corsica and in continental France. The increasing circulation of TOSV reported here should encourage the implementation of surveillance systems to control phlebovirus infection.

Keywords: phlebovirus; sandfly; sandfly fever Sicilian virus; Toscana virus; microneutralization; seroprevalence



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