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This study published in PLoS NTDs demonstrates exposure to JEV in pigs, and co-circulation of JEV genotype I and III in mosquitoes within an urban environment in South Vietnam

Japanese encephalitis virus (JEV) is a mosquito-borne, zoonotic flavivirus causing encephalitis in humans and reproductive disorder in pigs. JEV is present in large parts of Asia, where urbanization is high. Households within and outside Can Tho city, South Vietnam, were selected to monitor circulation of JEV. A nested RT-PCR was established to detect the presence of JEV in mosquitoes whereas sera from pigs belonging to households within the province were analyzed for the presence of antibodies to JEV. A total of 7885 mosquitoes were collected and divided into 352 pools whereof seven were JEV-positive, six of which were collected within the city. Fragments from four pools clustered with JEV genotype III and three with genotype I. Of the 43 pigs sampled inside the city 100% had JEV antibodies. This study demonstrates exposure to JEV in pigs, and co-circulation of JEV genotype I and III in mosquitoes within an urban environment in South Vietnam. Thus, although JEV has mainly been considered a rural disease, the potential for transmission in urban areas cannot be ignored.



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