Mpox outbreak in Rio de Janeiro, Brazil: a translational approach.

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Abstract

Mpox is a zoonotic disease historically reported in Africa. Since 2003, limited outbreaks have occurred outside Africa. In 2022, the global spread of cases with sustained interhuman transmission and unusual disease features raised public health concerns. We explore the mpox outbreak in Rio de Janeiro (RJ) state, Brazil, in an observational study of mpox-suspected cases from June to December 2022. Data collection relied on a public healthcare notification form. Diagnosis was determined by MPXV-PCR. In 46 confirmed cases, anti-VACV IgG was determined by ELISA, and seven MPXV genomes were sequenced. A total of 3,095 cases were included, 816 (26%) with positive MPXV-PCR results. Most positive cases were men in their 30s and MSM. A total of 285 (35%) MPXV-PCR+ patients lived with HIV. Eight were coinfected with varicella-zoster virus. Anogenital lesions and adenomegaly were associated with the diagnosis of mpox. Females and individuals under 18 represented 9% and 5% of all confirmed cases, respectively, showing higher PCR cycle threshold values and fewer anogenital lesions than adult men. Anti-VACV IgG was detected in 29/46 (63%) patients. All analyzed sequences belonged to clade IIb. In RJ state, mpox presented a diverse clinical picture, represented mainly by mild cases with low complication rates and prominent genital involvement. The incidence in females and children was higher than usually reported. The observation of a bimodal distribution of Ct values, with few positive results, may suggest the need to review the diagnostic criteria in these groups.

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