

Japanese encephalitis virus detected in Victoria

advice as of 4 March 2022

Issue

- Japanese encephalitis (JE) virus can cause a rare but potentially serious infection of the brain and is spread to humans through mosquito bites.
- Several current and recent cases of encephalitis in Victoria confirmed to be caused by JEV.
- Cases generally had extensive mosquito exposure prior to illness onset and were in the areas near the Murray River.

Symptoms and transmission

- JE virus is transmitted to humans through the bite of an infected mosquito.
- 90 per cent of JE virus infections are asymptomatic. Less than 1 per cent of people infected with JE virus develop clinical disease.
- Encephalitis is the most serious clinical consequence of JE virus infection.
- Illness usually begins with sudden onset of fever, headache and vomiting. Mental status changes, focal neurological deficits, generalised weakness, movement disorders, loss of coordination and coma may develop over the next few days.
- The encephalitis cannot be distinguished clinically from other central nervous system infections.
- Incubation period is usually 6-16 days.

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Recommendations for clinicians

- Consider the possibility of JE virus or other arboviruses in patients presenting with encephalitis or a compatible illness, in whom other causes of encephalitis, such as Herpes Simplex Virus (HSV), Varicella Zoster Virus (VZV) and enteroviruses, have been excluded.
- Particularly in those who have spent time within rural or regional Victoria or have had extensive mosquito exposure or contact with pigs within the few weeks prior to symptom onset.

Recommended testing for patients with encephalitis without another pathogen diagnosis, especially with compatible MRI or CT findings, in adults and children is as follows:

Blood (serum tube – 2 mL from children, 5-8 mL from adults)

- Acute and convalescent (3-4 weeks post onset) for flavivirus and JEV IgG, IgM and Total Ab
- Culture/PCR on acute whole blood EDTA sample

CSF (at least 1 mL)

- Flavivirus and JEV PCR and culture
- Flavivirus and JEV IgG, IgM and Total Ab

Urine (2-5 mL in sterile urine jar)

- Flavivirus and JEV PCR and culture

Recommendations for clinicians

- ✓ Send specimens urgently (same or next day) to Victorian Infectious Diseases Reference Laboratory (VIDRL) for flavivirus serology, PCR and culture and transported at 4 degrees Celsius.
 - ✓ Request forms should be appropriately labelled. The on-call pathologist at VIDRL should be contacted to provide information on samples being sent.
 - ✓ Urgent notifiable condition that **must** be reported immediately to the department if suspected or confirmed by medical practitioners and pathology services by phoning 1300 651 160 (24 hours).
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- Timely reminder for GPs to take patients travel history
 - Increase awareness for people residing in or planning to visit the Murray River area of the risk of JE virus and should take steps to significantly limit their exposure to mosquitoes
 - A vaccination program targeting those most at risk will commence shortly
 - Subscribe to Chief Health Officer alerts and for updated JEV advice and other current health issues facing the Victorian public and the health sector. As soon as an alert is published it will be emailed to you.
<https://www.health.vic.gov.au/health-advisories/japanese-encephalitis-virus-detected-in-victoria>