

Viral meningitis due to enterovirus 71 (EV71)

Alert for NSW Clinicians

1. An increase in viral meningitis due to EV71 has been reported by Illawarra-Shoalhaven LHD. Cases have been predominantly in adults but there is a risk of undetected paediatric cases.
2. Children under 5 years of age are most likely to develop severe disease.
3. Children with viral meningitis/encephalitis and any warning signs of severe disease should be immediately discussed with a specialist paediatrician.

Illawarra Shoalhaven Local Health District (ISLHD) has reported an increase in cases of EV71 viral meningitis, including 22 hospitalised cases since March 2018. While four cases have been infants, most of the cases have been in adults including one person aged in their 60s.

Enteroviruses usually cause no illness at all, but when symptoms occur they are usually mild and include fever, runny nose, cough, skin rash, mouth blisters and muscle aches. Some enterovirus infections are associated with viral conjunctivitis and hand, foot and mouth disease.

EV71 is one of a number of enteroviruses that are more likely to cause neurological complications, and has caused several outbreaks in NSW, most recently in 2013. During outbreaks, a small proportion of cases are complicated by neurological illness.

Warning signs of severe EV71 infections

Children with EV71 can present with an acute febrile illness and neurological complications (including meningitis, encephalitis, or acute flaccid paralysis). This can sometimes be followed by rapidly progressive, and potentially fatal, cardio-respiratory collapse due to **neurogenic pulmonary oedema**.

Warning signs of severe EV71 infections include the following:

- Myoclonic jerks, particularly in sleep
- Ataxia, weakness, or any neurological signs
- Severe, unexplained or persistent tachycardia or poor perfusion
- Hypertension and/or bradycardia
- Urinary retention
- Altered level of consciousness or irritability
- Tachypnoea or any other signs of respiratory distress
- Pulmonary oedema on chest Xray

If a child with suspected viral meningitis or encephalitis has any of these warning signs they should be immediately referred for a specialist paediatrician assessment.

Investigations (in addition to routine investigations)

Collect a stool specimen (or rectal viral swab) and throat swab or nasopharyngeal aspirate for enterovirus PCR. A stool specimen is preferable to a rectal swab.

If CSF collection is clinically indicated it should also be sent for routine microbiology, culture and sensitivities (MCS), biochemistry (glucose and protein) and enterovirus PCR (+/- other investigations as indicated, e.g. HSV PCR).

The above assays are available through all NSW Health Pathology (NSWHP) microbiology laboratories and some private laboratories. Enterovirus-positive samples should be referred to the NSWHP-Prince of Wales laboratory for further enterovirus typing.

Further information

See the *Enteroviruses (non-polio) and human parechoviruses fact sheet - Information for clinicians*, available at www.health.nsw.gov.au/Infectious/factsheets/Pages/enterovirus-clinicians.aspx.



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