

Short reports

IMPORTATION OF WILD POLIOVIRUS INTO AUSTRALIA, JULY 2007

Bruce Thorley, Heath Kelly, Jason Roberts

On 13 July 2007, the National Poliovirus Reference Laboratory (NPRL), which is part of the Victorian Infectious Diseases Reference Laboratory, confirmed infection with wild poliovirus serotype 1 in an overseas-born student who had recently returned from Pakistan. This is the first laboratory confirmed case of polio due to wild poliovirus reported in Australia since 1977. Pakistan is one of the four remaining polio endemic countries along with India, Afghanistan and Nigeria.¹ Wild poliovirus is currently circulating in six other countries – Angola, Chad, Democratic Republic of Congo, Myanmar, Niger and Somalia – due to importation from endemic countries.¹ The Australian wild poliovirus importation was characterised by the methods described in the accompanying annual report of the NPRL.²

The last wild poliovirus isolated from a patient with poliomyelitis in Australia prior to this case was an imported case from Turkey in 1977.³ Based on phylogenetic analysis of archived poliovirus isolates, we believe the last endemic case of wild poliovirus infection in Australia to have occurred in the late 1960s, although an uncharacterised serotype 3 poliovirus was isolated from a case from Queensland in the early 70s, and wild poliovirus could not be excluded as the causative agent.

We have previously emphasised the need for vigilance in order to maintain Australia's polio free status.⁴ This case reinforces that message. We continue to urge all clinicians who are consulted by a person of any age presenting with acute flaccid paralysis, to consider poliomyelitis in the differential diagnosis of the illness. Referral of stool samples to the NPRL at VIDRL is critical for complete characterisation of virus isolates.²

Importation of wild virus or vaccine-derived poliovirus into Australia is an extremely low probability event. The current case demonstrates that low probability events occur and confirms the requirement for vigilance until the world is declared free of circulating wild poliovirus. Although poliovirus serotype 2 has been eradicated from the world,⁵ the eradication of serotypes 1 and 3 is still some years in the future.

Author details

Dr Bruce Thorley, Head¹

Associate Professor Heath Kelly, Head, Epidemiology Unit²

Mr Jason Roberts, Medical Scientist¹

1. Poliovirus Reference Laboratory, Victorian Infectious Diseases Reference Laboratory
2. Victorian Infectious Diseases Reference Laboratory

Corresponding author: Dr Bruce Thorley, Head, Poliovirus Reference Laboratory, Victorian Infectious Diseases Reference Laboratory, North Melbourne, VIC 3053. Telephone: +61 3 9342 2607. Facsimile: +61 3 9342 2666. Email: bruce.thorley@mh.org.au

References

1. World Health Organization. Global Polio Eradication Initiative. Weekly poliovirus update. Available from: <http://www.polioeradication.org/caseload.asp> Accessed 19 July 2007.
2. Roberts J, Brussen KA, Ibrahim A, Thorley B. Annual Report of the National Poliovirus Reference Laboratory 2006. *Commun Dis Intell* 2007;31:263–269.
3. Kennett ML, Brussen KA, Wood DJ, van der Avoort HG, Ras A, Kelly HA. Australia's last reported case of wild poliovirus infection 1999. *Commun Dis Intell* 1999;23:77–79.
4. Thorley B, Brussen K, Elliott E, Kelly H. Vigilance is required for Australia to remain polio free. *Med J Aust* 2006;184:474–475.
5. World Health Organization. Transmission of wild poliovirus type 2—apparent global interruption. *Wkly Epidemiol Rec* 2001;76:95–97.