
Locally acquired severe non-O1 and non-O139 *Vibrio cholerae* infection associated with ingestion of imported seafood

TO THE EDITOR: We report a case of severe *Vibrio cholerae* infection acquired in Sydney, likely due to ingestion of imported seafood.

An 83-year-old man with Parkinson disease presented with a 3-day history of vomiting, large-volume watery diarrhoea and acute renal impairment necessitating admission to the intensive care unit. Blood cultures grew curved gram-negative bacilli, and intravenous piperacillin-clavulanic acid was commenced. Subsequent microbiological testing of blood isolated *V. cholerae*, prompting testing and confirmation of *V. cholerae* in stool cultures. The strain was identified as non-O1 and non-O139 by serotyping, and toxin gene-negative by polymerase chain reaction testing.

The patient subsequently reported ingestion of imported seafood (a marinara mix containing mussels from Chile, prawns from Vietnam and squid from China), purchased from a local supermarket, although none of the suspected food was available for testing. He had no recent travel history or exposure to marine or brackish-water environments and no unwell contacts.

Antimicrobial therapy was changed to ciprofloxacin. The patient's recovery was complicated by caecal pseudo-obstruction requiring endoscopic decompression. He was discharged after 2 weeks of antibiotic treatment.

Although rare, sporadic cases of both epidemic (O1 and O139

serotypes) and non-epidemic (non-O1 and non-O139 serotypes) *V. cholerae* infection have been reported in Australia.¹ Australian cases have been linked to ingestion of imported seafood, with a notable outbreak in Sydney associated with imported whitebait.² *V. cholerae* is known to be present in Australian estuaries, and some endemic cases have been associated with local aquatic exposure.³

While only O1 and O139 isolates are mandated for reporting to Australian public health units, non-epidemic strains of *V. cholerae* are associated with bacteraemia and a poor prognosis.⁴ Clinically suspected cases of *V. cholerae* infection should be reported to public health units, pending microbiological confirmation. As identification of *Vibrio* species is not routinely done on stool cultures, a suspicion of *Vibrio* infection must be communicated to laboratories.

Under current Australian law, only imported cooked prawns are required to be tested for *Vibrio* species contamination, and there is no restriction on the geographical origin of seafood imported into Australia.^{5,6} This case highlights an ongoing risk of potentially severe *V. cholerae* infection from imported seafood, and it should be considered as a differential diagnosis for patients presenting with severe enteritis and a compatible exposure history.

Chiao-Yun Hsu Medical Registrar¹

Simon Pollett Infectious Diseases Advanced Trainee²

Patricia Ferguson Infectious Diseases Physician²

Brenden J McMullan Microbiology Registrar²

Vicki Sheppeard Public Health Physician³

Suzanne E Mahady Epidemiologist⁴

¹ Westmead Hospital, Sydney, NSW.

² Centre for Infectious Diseases and Microbiology, Westmead Millennium Institute for Medical Research, Sydney, NSW.

³ Public Health Unit, Nepean Blue Mountains and Western Sydney Local Health Districts, Sydney, NSW.

⁴ Sydney School of Public Health, University of Sydney, Sydney, NSW.

julia.cy.hsu@gmail.com

Competing interests: No relevant disclosures.

doi: 10.5694/mja13.10087

1 Rogers RC, Cuffe RG, Cossins YM, et al. The Queensland cholera incident of 1977. 2. The epidemiological investigation. *Bull World Health Organ* 1980; 58: 665-669.

2 Forssman B, Mannes T, Musto J, et al. *Vibrio cholerae* O1 El Tor cluster in Sydney linked to imported whitebait. *Med J Aust* 2007; 187: 345-347.

3 Desmarchelier PM, Wong FY, Mallard K. An epidemiological study of *Vibrio cholerae* O1 in the Australian environment based on rRNA gene polymorphisms. *Epidemiol Infect* 1995; 115: 435-446.

4 Ko WC, Chuang YC, Huang GC, Hsu SY. Infections due to non-O1 *Vibrio cholerae* in southern Taiwan: predominance in cirrhotic patients. *Clin Infect Dis* 1998; 27: 774-780.

5 Food Standards Australia New Zealand. Safe seafood Australia: a guide to the Australian Primary Production and Processing Standard for Seafood. Canberra: FSANZ, 2006.

6 Australian Government Department of Agriculture, Fisheries and Forestry. Imported food notice 09/12. Tests applied to risk category foods. Canberra: DAFF, 2012. <http://www.daff.gov.au/aqis/import/food/notices/2009/2012/ifn-0912> (accessed Sep 2012). □