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AUSTRALIA RECORDS FIRST CASE OF *M. CHIMAERA* INFECTION LINKED TO OPEN HEART SURGERY

Australia's first diagnosis of a rare and hard to diagnose infection may signal substantial health risks for patients.

Thousands of patients who have undergone cardiothoracic surgery in Australia could be at risk from a rare bacterial infection, according to a recent study to be published in the journal of *Infection, Disease & Health*. The study, which will be published in March, reports Australia's first case of disseminated *Mycobacterium chimaera* infection linked to cardiothoracic surgery.

Mycobacterium chimaera infection is a species of slow-growing, non-tuberculous bacteria. Until recently, the infection was limited to patients with pulmonary disease and those who were significantly immunocompromised. Cases following cardiothoracic surgery have only been reported since 2013 and could potentially affect up to 1-2 per 1000 cardiothoracic surgery patients.

Genome sequencing from this and other infections diagnosed in the USA and Europe suggest that certain heater cooler units used to control the temperature of fluids during cardiothoracic bypass operations may have been involved in the transmission of the infection.

Prof Allen Cheng, an infectious diseases physician at The Alfred hospital in Melbourne and a spokesperson for the Australasian Society for Infectious Diseases (who is not involved in the report), urged health care professionals to be aware of this infection in patients that have had cardiac bypass surgery.

"One of the major learnings from this case is that the infection can have unusual presentations", Prof Cheng said. "Disseminated mycobacterial infection should be suspected in patients that have had cardiac bypass surgery with symptoms or signs of infection, particularly where conventional bacterial cultures are negative. Early diagnosis will help patients with infection get the appropriate treatment quickly."

Although this infection is rare, it is difficult to diagnose and there is not much awareness among at-risk patients or health professionals. The symptoms, which include fever, weight loss and fatigue, may not develop for some time after surgery and are non-specific in nature. This could mean that many cases have gone unreported.

Even with best practice infection control and disinfection measures in place, the authors warn that in the absence of an engineering solution to completely remove infection risk from heater cooler units, further cases are possible. This is despite health system responses being introduced after the first reported case in 2013.

In Australia, following preliminary notification of this case, the Therapeutic Goods Administration (TGA) and the Australian Commission on Safety and Quality in Healthcare have provided risk minimisation, device management and infection control advice to health facilities and staff. In some areas, at-risk patients have also been notified.

ACIPC President, Professor Ramon Shaban, advises that "Patients who have undergone cardiothoracic surgery in recent years should contact their treating doctor or surgeon if they have any unexplained symptoms suggestive of infection, such as fever, weight loss or extreme fatigue".

ENDS



Notes for editors

The article is “First Australian Case of Disseminated Mycobacterium chimaera Infection Post-Cardiothoracic Surgery” by Evan Bursle, E Geoffrey Playford, Chris Coulter, Paul Griffin. The article has been published in *Infection, Disease & Health* by Elsevier. The full text of this article is available at [http://www.idhjournal.com.au/article/S2468-0451\(17\)30002-0/fulltext](http://www.idhjournal.com.au/article/S2468-0451(17)30002-0/fulltext)

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The Australasian Society for Infectious Diseases is the peak professional body for infectious diseases and microbiology in the region. Membership encompasses Infectious Diseases Physicians, Clinical Microbiologists, Scientists, Infection Control Practitioners, Public Health Physicians, Sexual Health Physicians, Veterinarians and others eminent in the field of infectious diseases.

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