About the Author

Dr. Ge is a virologist at the National Research Center for Exotic Animal Diseases, Animal Health and Epidemiology Center, Qingdao, China. His primary research interest is prevention and control of exotic animal diseases.

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Address for correspondence: Xiaodong Wu or Zhiliang Wang, National Research Center for Exotic Animal Diseases, China Animal Health and Epidemiology Center, 369 Nanjing Rd, Qingdao, Shandong 266032, China; emails: wuxiaodong@cahec.cn or wangzhiliang@cahec.cn

LETTERS

Familial Transmission of *emm12* Group A *Streptococcus*

Rachel Mearkle, Sooria Balasegaram, Shiranee Sriskandan, Vicki Chalker, Theresa Lamagni

Author affilliations: Public Health England, Chilton, UK (R. Mearkle); Public Health England, London, UK (S. Balasegaram, V. Chalker, T. Lamagni); Imperial College, London, UK (S. Sriskandan)

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To the Editor: We read with interest the recent research letter by Duployez et al. describing a cluster of invasive group A *Streptococcus* (iGAS) infections in a cohabiting couple in their 60s (*1*). The report illustrates the increased risk of infection for persons living in a household with someone with iGAS infection. We write to draw readers' attention to our recent study, which adds to the body of evidence on the risk of household transmission of iGAS (*2*).

Population-based studies from Australia, Canada, the United Kingdom, and the United States, based on 13 household clusters, assessed the risk of transmitting iGAS infection through household contact (*3*). We identified an additional 24 household clusters in England using addresses captured through national surveillance in 2009 and 2011–2013. For all 12 clusters in which *emm* typing was performed on both patients, results were the same for both. All secondary cases occurred within 1 month of the index case (median 2 days). Among contacts, the 30-day incidence rate was 4,520/100,000 person-years, 1,940 times higher than the background incidence (2.34/100,000 person-years). Spouses and partners ≥75 years of age (6 pairs) were at particularly high risk for developing infection; incidence was estimated at 15,000 (95% CI 5,510–32,650)/100,000 person-years, 1,650 times higher than the background risk in this age group (9.09/100,000, 95% CI 5,510–32,650). These data resulted in an estimated number needed to treat of 82 (46–417).

Duployez's article also highlights differences between countries in policies for antimicrobial chemoprophylaxis. National guidance for public health management of community iGAS infection is being revised in the United Kingdom; oral penicillin V is currently recommended as the first choice for chemoprophylaxis (*4*). However, questions remain about the efficacy of chemoprophylaxis and the practicalities of timely administration to benefit others in a household, given that 38% of pairs were co-primary cases or had only 1 day between initial and subsequent infections.

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Address for correspondence: Rachel Mearkle, Public Health England South East, Thames Valley Health Protection Team, Chilton, Oxfordshire, OX11 0RE, UK; email: Rachel.Mearkle@phe.gov.uk

Acquired Resistance to Antituberculosis Drugs

Htin Lin Aung, Wint Wint Nyunt, Yang Fong, Bruce Russell, Gregory M. Cook, Si Thu Aung

Author affiliations: University of Otago, Dunedin, New Zealand (H.L. Aung, B. Russell, G.M. Cook); Ministry of Health and Sports, Yangon, Myanmar (W.W. Nyunt); Massey University, Palmerston North, New Zealand (Y. Fong); Ministry of Health and Sports, Naypyitaw, Myanmar (S.T. Aung)

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To the Editor: We read with great interest the article by Loutet et al. on acquired resistance to antituberculosis drugs in low-burden settings, such as England, Wales, and Northern Ireland (*1*), and support their assertion that detecting acquired resistance should be a priority in high-burden settings. This objective is particularly urgent in Myanmar, where tuberculosis (TB) is highly endemic (*2*) and drug-resistant TB is present through both acquired drug resistance and direct transmission. Unfortunately, the overwhelming number of TB cases precluded routine phenotypic drug susceptibility testing (DST) of first- or second-line drugs, so we began using whole-genome sequencing (WGS), which enabled us to more rapidly diagnose drug-resistant TB (*3*). Here, we briefly describe 2 cases of acquired antituberculosis drug resistance detected by WGS.

Patient A, diagnosed with rifampin-susceptible TB by Xpert (Cepheid Inc., Sunnyvale, CA, USA), received a treatment regimen containing first-line drugs but failed to achieve smear conversion at the 3-month follow-up. WGS indicated that the isolate was resistant to isoniazid, streptomycin, and rifampin. WGS and phenotypic DST of the isolate at baseline revealed it was resistant to isoniazid and streptomycin. Isolates from before and after treatment differed by 2 single-nucleotide polymorphisms, suggesting that rifampin resistance was acquired during therapy (*4*). Patient B was diagnosed with rifampin-resistant TB and reported that he had started multidrug-resistant (MDR) TB treatment 6 months earlier but failed to continue the treatment. WGS and phenotypic DST showed the case had been MDR TB (resistant to isoniazid, rifampin, and streptomycin, but sensitive to amikacin) at baseline but had become pre–extensively drug resistant (amikacin resistance was acquired during treatment).

Loutet et al. showed that WGS provides an effective way to evaluate TB drug resistance in low-endemicity settings (*5*). We believe WGS is even more vital to help direct MDR TB treatment in high-burden settings, to halt the continued spread of TB.

Ethics approval for this study was given by the Ethics Review Committee of Department of Medical Research, Yangon, Myanmar.

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Address for correspondence: Htin Lin Aung, Sir Charles Hercus Health Research Fellow, Department of Microbiology and Immunology, School of Biomedical Sciences, University of Otago, PO Box 56, Dunedin, New Zealand; email: htin.aung@otago.ac.nz