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Event:	Two cases of extensively drug resistant gonorrhoea in England
Notified by:	Blood Safety, Hepatitis, STI & HIV Division, National Infection Service, Colindale
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PHE NIRP Level National:- Standard response	
Incident Lead:	Nick Phin

Background and Interpretation:

In the last three months, two cases of infection with extensively-drug-resistant (XDR) *Neisseria gonorrhoeae* (Ng) have been confirmed by the PHE Reference Laboratory. These cases are not linked, and are from different PHE Centre areas in England. Both are female and all reported partners are male.

The first case presented to a sexual health clinic in October 2018 with genital symptoms. She reported 4 sexual contacts while on holiday in Europe in September. She cleared the infection following first line treatment with ceftriaxone 500mg plus azithromycin 1g. The second case presented to a sexual health clinic in November 2018 with anal and genital symptoms. She reported a sexual contact with a male who had recently returned from the same holiday destination as the first case. She failed initial treatment with ceftriaxone 1g, and subsequent treatment with a combination of gentamicin 240mg plus azithromycin 2g. She cleared infection after 3 days of IV ertapenem.

Both isolates are resistant to ceftriaxone (MIC 1.0mg/L) and have intermediate susceptibility to azithromycin (MIC 0.5mg/L). The isolates are also resistant to cefixime, penicillin, ciprofloxacin and tetracycline, but are susceptible to spectinomycin. The MICs to gentamicin and ertapenem are low, suggesting susceptibility, although there are no breakpoints for these antimicrobials. Whole genome sequencing is underway.

The IMT has been convened to progress the investigations, ensure contacts are traced, and contain spread. Identifying the origins of the isolates and the potential for onward transmission is a priority.

PHE has developed information for health professionals and the public that will be available on the Gov.uk website. In addition, the British Association for Sexual Health and HIV (BASHH) have agreed to inform their members about these cases and their implications for practice.

Implications for PHE Centres

Health Protection Teams (HPTs) may receive enquiries from NHS hospitals and GUM services about the cases, and reporting and follow up of suspected XDR Ng cases. HPTs may receive requests from NIS Colindale for additional information and/or for samples on suspected cases and contacts of XDR Ng.

Implications for PHE sites and services

Specialist microbiology services may receive enquiries from NHS hospitals and GUM services about the cases, and reporting, follow up and treatment of suspected cases of XDR Ng.

Recommendations to PHE Centres

HPTs are reminded to ask hospital microbiology departments to send Ng isolates with ceftriaxone resistance or high-level azithromycin resistance to Reference Bacteriology at Colindale for confirmation. HPTs are requested to remind GPs to refer all suspected cases of gonorrhoea to GUM services for appropriate management according to PHE guidance¹. PHE Centres are requested to raise awareness via cascade of this briefing note to PHE Sexual Health Facilitators.

Recommendations to PHE sites and services

Clinical laboratories are reminded to continue to refer Ng isolates with resistance to ceftriaxone (MIC >0.125mg/L) or azithromycin (MIC >256mg/L) to Reference Bacteriology at Colindale for confirmation.



Implications and recommendations for local authorities

Local authority sexual health commissioners may be asked to assist with the investigation of suspected XDR Ng cases and support provision of local sexual health promotion activities. Commissioners should ensure sexual health care pathways enable prompt diagnosis, culture for susceptibility testing, effective treatment, test of cure, partner notification and a full sexually transmitted infection screen.¹

References/ Sources of information

1. Public Health England. Guidance for the detection of gonorrhoea in England. Public Health England. London. 2014. Available at:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/405293/170215_Gonorrhoea_testing_guidance_REVISED_2_.pdf
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