

Poor adherence to gonorrhoea treatment guidelines in general practice in England

Hamish Mohammed, Bersabeh Sile, Martina Furegato, Helen Fifer and Gwenda Hughes

HIV & STI Department, National Infection Service, Public Health England

Diagnoses of gonorrhoea are on the increase in England and a cluster of high-level azithromycin resistance was detected in 2015.(1, 2) Treatment options are limited and, in response to emerging antimicrobial resistance, treatment guidelines have changed twice since 2004.(3, 4) The currently recommended treatment for gonorrhoea is dual therapy with 500mg ceftriaxone (intramuscularly) and 1g azithromycin (orally).(3) Following a diagnosis of gonorrhoea in general practice (GP), referral to specialist sexual health services for treatment, test of cure, partner notification, further STI testing and culture for antimicrobial susceptibility testing is recommended.(5)

Here, we report the results of an analysis of data from GPs in England from the Clinical Practice Research Datalink, an anonymised extract of visits to a sample of GPs whose patients are representative of the UK population.(6) As the treatment guidelines were last updated in 2011,(3) we focus on the gonorrhoea diagnoses reported from 2011—2014. During this time, an estimated 4,150 gonorrhoea diagnoses were made by GPs in England, representing 4% of the total number of diagnoses made in all clinical settings reporting data (GPs and specialist sexual health clinics).

The proportion of cases treated each year by GPs fluctuated between 50-52% ($p=0.729$). Amongst those treated, the proportion given the recommended dual therapy ranged from 11-5% (2011—2014; $p=0.488$). Most cases were prescribed antibiotics no longer recommended for the treatment of gonorrhoea. From 2011—2014, the proportion of gonorrhoea diagnoses for which penicillins were prescribed fluctuated between 15-20% ($p=0.729$), while that of ciprofloxacin and azithromycin monotherapy ranged from 15-5% ($p=0.166$) and 7-30% ($p=0.166$), respectively.

These findings are consistent with trends reported prior to the most recent change in treatment guideline in 2011.(7) While GPs diagnose fewer cases of gonorrhoea than specialist clinics, they make an important contribution to the management of this infection and there is a need to raise awareness of current treatment guidelines amongst them; this has recently been highlighted in a letter from England's Chief Medical Officer to GPs.(8) Prompt and correct treatment of gonorrhoea is required to prevent treatment failure, onward transmission and the further emergence of antimicrobial resistance.

References

1. Mohammed H, Mitchell H, Sile B, Duffell S, Nardone A, Hughes G. Increase in Sexually Transmitted Infections among Men Who Have Sex with Men, England, 2014. *Emerging Infectious Disease journal*. 2016;22(1):88.
2. Public Health England. Surveillance of antimicrobial resistance in *Neisseria gonorrhoeae*. HPR volume 9 issue 41: news (20 November). Accessed 7 Jan 2016.
3. Bignell C, Fitzgerald M, others. UK national guideline for the management of gonorrhoea in adults, 2011. *International journal of STD & AIDS*. 2011;22(10):541-7.
4. British Association for Sexual Health and HIV. National Guideline on the Diagnosis and Treatment of Gonorrhoea in Adults. 2005. <http://www.bashh.org/documents/116/116.pdf> (accessed 7 Jan 2016).
5. Royal College of General Practitioners (Sex; Drugs; HIV and Viral Hepatitis Group), British Association for Sexual Health and HIV. Sexually Transmitted Infections in Primary Care 2013 (RCGP/BASHH). Lazaro N. Available at: http://www.bashh.org/BASHH/BASHH_Groups/BASHH_Primary_Care_Group/BASHH/BASHH_Groups/BASHH_Primary_Care_Group.aspx?hkey=1e5feacc-198d-4516-8277-3dc51ade47e8. Accessed 22 January, 2016.
6. Williams T, van Staa T, Puri S, Eaton S. Recent advances in the utility and use of the General Practice Research Database as an example of a UK Primary Care Data resource. *Therapeutic Advances in Drug Safety*. 2012;3(2):89-99.
7. Wetten S, Mohammed H, Yung M, Mercer CH, Cassell JA, Hughes G. Diagnosis and treatment of chlamydia and gonorrhoea in general practice in England 2000–2011: a population-based study using data from the UK Clinical Practice Research Datalink. *BMJ Open*. 2015;5(5).
8. British Association for Sexual Health and HIV. Chief Medical Officer/Chief Pharmaceutical Officer Letter on antimicrobial resistance and gonorrhoea. Available at: http://www.bashh.org/BASHH/News/News_Items/Chief_Medical_Officer_Chief_Pharmaceutical_Officer_Letter_on_antimicrobial_resistance_and_gonorrhoea.aspx. Accessed 7 Jan 2016.