Emerging risk of untreatable gonorrhea and what to do about it

Case scenario

An 18-year-old woman comes to see you with a sore throat that has persisted for more than a week. She has no past medical history and no cough, coryza, or fever. Upon questioning she tells you that she has started university, is a good student, likes to spend time on social media, and goes to parties most weekends. Her only medication is birth control pills. On examination, she is not in acute distress and her only relevant signs are mild cervical adenopathy and erythematous tonsils. You take a swab of the throat and place it in a charcoal-based medium. You let her know that you will call her with the result and discuss how best to take care of herself in the meantime. Two days later the test result comes in: it is positive for gonorrhea.

Evidence

Gonorrhea is the second most common sexually transmitted infection in Canada, after chlamydia. In Canada, much like the rest of the world, its incidence has been steadily rising.[1] Although pharyngeal gonorrhea might present with a sore throat, it is often asymptomatic, resulting in onward transmission. Anogenital infection can be asymptomatic in women and, if undetected and untreated, can lead to serious complications, including a several-fold increase in HIV transmission, and to pelvic inflammatory disease, which can result in acute or chronic lower abdominal pain, ectopic pregnancy, spontaneous abortion, and infertility.[2]

Unfortunately, we are running out of treatment options. Over the years, gonorrhea has become resistant to tetracyclines, sulfonamides, trimethoprim combinations, and quinolones. The US Centers for Disease Control and Prevention recently reported steeply rising rates of resistance to the last 2 effective antibiotics available, azithromycin and ceftriaxone. Between 2013 and 2014, resistance to azithromycin rose from 0.6% to 2.5%, while resistance to ceftriaxone rose from 0.4% to 0.8%.[3] Although the rates are still low, the trend is concerning, as no other treatment options are currently available. A similar concern has been identified in Canada.[4]

The World Health Organization, the Centers for Disease Control and Prevention, and the Public Health Agency of Canada now all recommend combination therapy as first-line treatment for gonorrhea with either ceftriaxone (by injection) or cefixime (orally) as a single dose plus azithromycin as a single dose.[2-4] This needs to become more widely known. In a recent online survey of physician prescribing practices for gonorrhea, as few as 20% of clinicians indicated they would prescribe a cephalosporin and azithromycin as first-line therapy for pharyngeal infection.[5] This was a convenience sample and might not have been representative, but it does suggest not all clinicians are aware of the need for combination therapy. A useful tool for clinicians is the Public Health Agency of Canada's sexually transmitted infection treatment guidelines available on a smartphone application. This can be downloaded for free for Apple or Android devices and puts all the latest treatment guidance at your fingertips.

Cet article se trouve aussi en francais à la **page 215**.

Bottom line

The rising incidence of gonorrhea and the increasing rates of resistance to the last effective antibiotics available to treat it is setting up a perfect-storm situation that calls for concerted efforts in clinical care and public health. We need to treat cases effectively, follow up on contacts, and reinforce prevention messages. Now is the time to heighten awareness and increase efforts to stem the risk of returning to a pre-antibiotic era.

References

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CCDR CANADA COMMUNICABLE DISEASE REPORT

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