SUMMARY: DIAGNOSIS AND MANAGEMENT OF GONOCOCCAL INFECTIONS 2013 CANADIAN GUIDELINES ON SEXUALLY TRANSMITTED INFECTIONS

KEY ISSUES

In Canada, reported cases of gonococcal infection have increased since 1997. Progressive resistance to penicillin, tetracycline, and (more recently) quinolones has emerged; now, treatment failure with **thirdgeneration oral and injectable cephalosporins** has been observed, particularly among men who have sex with men.

Nucleic Acid Amplification Testing (NAAT) has been used with increasing frequency. As a result, less information is available about the antibiotic sensitivity of the *Neisseria gonorrhoeae* organism in Canada.

DIAGNOSIS

When gonococcal infection is suspected, samples should be taken from symptomatic patients and sent for **both cultures and NAAT**. In addition to determining antimicrobial sensitivities prior to treatment, cultures are particularly important in the following situations:

- Men who have sex with men who are symptomatic,
- Possible sexual abuse or sexual assault (rectal, pharyngeal, vaginal),
- Suspected pelvic inflammatory disease,
- If the infection was acquired in a geographical area with high rates of antimicrobial resistance,
- In cases of suspected treatment failure or in situations where there is an increased probability of treatment failure.

2013 RECOMMENDED TREATMENT

Patients should be treated with combination therapy (two antibiotics) in response to potential antimicrobial resistance and high rates of concomitant infection with chlamydia. Monotherapy should be avoided.

- Among men who have sex with men, the preferred therapy for uncomplicated anogenital and pharyngeal infection is: ceftriaxone 250 milligrams intramuscularly PLUS azithromycin 1 gram orally in a single dose.
- In other adults and youth (at least nine years of age), the preferred therapy for uncomplicated anogenital and pharyngeal infection is: ceftriaxone 250 milligrams intramuscularly PLUS azithromycin 1 gram orally in a single dose.
 - For uncomplicated anogenital infection only, cefixime 800 milligrams orally PLUS azithromycin 1 gram orally in a single dose is also a preferred therapy.

Alternative management for adults and youth (at least nine years of age) is detailed in the full chapter revision. Preferred and alternative management for neonates, children, and individuals with disseminated infection are detailed in the full **chapter**.





REPORTING

Gonorrhea is a reportable infection: local public health authorities should be promptly notified. In addition, it is helpful if the Public Health Agency of Canada is promptly notified of cefixime, ceftriaxone or azithromycin treatment failures through the local and provincial/territorial public health departments.

FOLLOW-UP

All sexual partners of the index case within 60 days prior to symptom onset or date of specimen collection (if the index case is asymptomatic) should be notified, tested, and empirically treated regardless of clinical findings and without waiting for test results.

Test of cure should ideally be completed on all cases; however, it is particularly important in the following situations:

- Individuals with persistent signs and symptoms post-therapy,
- Cases where compliance is in doubt,
- Re-exposure to an untreated partner has occurred,
- Pharyngeal infections,
- Cases treated with an alternate management other than ceftriaxone,
- Cases treated with quinolones in the absence of susceptibility testing,
- Cases where antimicrobial resistance to the administered therapy is documented or suspected,
- Cases linked to another case with documented antimicrobial resistance to the treatment given or to a case with treatment failure who was treated with the same antibiotic,

- Treatment failure for gonorrhea has occurred previously in the individual,
- Infection during pregnancy and in women (with gonococcal infection) undergoing therapeutic abortion,
- Part of management of complicated gonococcal infection (meningitis, endocarditis, septic arthritis),
- All children.

Test of cure, by culture, from all initially positive sites should be done 3 to 7 days after completion of therapy. In cases where culture is not available and NAAT is used as a test of cure, specimen collection should be delayed for 2 to 3 weeks after completion of treatment.

TREATMENT FAILURE

All suspected treatment failures should be investigated using culture to allow for antimicrobial susceptibility testing. Treatment failure is defined as absence of reported sexual contact during the post-treatment period AND one of the following:

- Presence of intracellular Gram-negative diplococci on microscopy taken at least 72 hours after completion of treatment,
- Positive *N. gonorrhoeae* on culture taken at least 72 hours after completion of treatment,
- Positive NAAT taken at least 2–3 weeks after completion of treatment.

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| PRINT | PDF |
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| Cat.: HP40-99/2014E | Cat.: HP40-99/2014E-PDF |
| ISBN: 978-1-100-23224-9 | ISBN: 978-1-100-23224-9 |
| Pub.: 130584 | Pub.: 130585 |

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