



Efficacy and Safety of Treatment Options for Uncomplicated Gonococcal Infections

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Summary

This Rapid Review was done to help update treatment recommendations by the Public Health Agency of Canada (PHAC). The results showed that there is a lack of studies comparing how well different antibiotics work and how safe they are for treating gonorrhea infections in different parts of the body. Some limited research found that using gentamicin plus azithromycin or ceftriaxone plus azithromycin led to high rates of curing the infection, with similar patient outcomes.

What does this mean?

There are still important gaps in our knowledge about the best treatments for gonorrhea infections. More research with larger and more diverse groups of people is needed to better understand how effective and safe these treatments are.

Citation: Dourka J, Lai Y, Pearson Sharpe J, McGill SC, Straus S, Tricco AC. Efficacy and Safety of Treatment Options for Uncomplicated Gonococcal Infections. CDA, August, 2024.

<https://www.cda-amc.ca/sites/default/files/pdf/htis/2024/RD0070-Efficacy-Safety-Treatment-Options-Gonococcal-Infections.pdf>

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What is the current situation?

Gonorrhea is the second most common sexually transmitted infection in Canada. It is caused by the bacteria *Neisseria gonorrhoeae* and is usually treated with antibiotics. However, it is getting harder to treat because the bacteria are becoming resistant to many antibiotics. Therefore, it is important to review which treatments work best. This includes finding out which antibiotics work best on their own or when combined with azithromycin for treating uncomplicated cases in adolescents and adults.

What questions did we aim to answer in our research?

- Q1: Which antibiotics, alone or combined with azithromycin, work best for treating uncomplicated gonorrhea infections in adolescents and adults?
- Q2: What is the most effective and safe dose of cefixime for treatment?

How did we approach these questions?

Our team conducted a review of all available literature related to the research questions, published since January 2016. We searched key resources, including journal citation databases, and conducted a focused internet search for relevant evidence. During the process of review, one researcher screened all studies for inclusion based on pre-set eligibility criteria, extracted data, and assessed the quality of randomized controlled trials (RCTs) using the Cochrane Risk of Bias 2 tool.

What answers did we find from our research?

From a total of 736 published articles and 63 potentially relevant citations from the grey literature search, 5 publications were included in this review. Two studies found that using either gentamicin with azithromycin or ceftriaxone with azithromycin worked well at clearing the infection, with both treatments working similarly overall. However, people who took gentamicin had slightly more treatment failures and side effects. Another study found that using gentamicin or ceftriaxone alone also cleared the infection in all patients. A separate study showed no major differences in side effects or antibiotic resistance between using ceftriaxone alone or with azithromycin. No studies were found that directly compared treatments using cefixime or ciprofloxacin, either alone or with azithromycin, or whether taking cefixime as a single or multiple doses made a difference.

How confident are we in these findings?

The findings are based on a small number of studies, giving us moderate confidence in the results. However, more research with larger and more diverse populations is needed to confirm these findings and further assess the safety and effectiveness of different treatments.