



Strategies for Effective Screening and Management of Chlamydia and Gonorrhea: Current Approaches

Ditte Svend*

Department of Radiation Biology, Aalborg University, Aalborg, Denmark

DESCRIPTION

Chlamydia trachomatis and *Neisseria gonorrhoeae* are two of the most common Sexually Transmitted Infections (STIs) worldwide. Both pathogens can lead to severe reproductive health complications if left untreated, including Pelvic Inflammatory Disease (PID), infertility, and increased susceptibility to HIV.

Chlamydia trachomatis

C. trachomatis is the most frequently reported bacterial STI globally, with millions of new cases annually. The highest prevalence is observed among adolescents and young adults aged 15-24 years, with women being disproportionately affected due to biological and behavioral factors. Chlamydia is often asymptomatic, particularly in women, which complicates early detection and increases the risk of untreated infections leading to severe complications.

Neisseria gonorrhoeae

N. gonorrhoeae, the causative agent of gonorrhea, is the second most common bacterial STI. Similar to chlamydia, it predominantly affects young people aged 15-24 years. Gonorrhea is notable for its rapid development of antibiotic resistance, posing significant challenges for treatment. The infection can be asymptomatic, particularly in women, but can also present with symptoms such as urethritis in men and cervicitis in women.

Screening strategies

Effective screening is potential for controlling the spread of *C. trachomatis* and *N. gonorrhoeae* infections. Due to the asymptomatic nature of these infections, especially in women, regular screening in high-risk populations is essential.

Chlamydia screening: The U.S. Centers for Disease Control and Prevention (CDC) recommends annual chlamydia screening for sexually active women under 25 years of age and

older women with risk factors such as new or multiple sex partners. Men who have Sex with Men (MSM) and individuals with HIV should also be screened regularly. Nucleic Acid Amplification Tests (NAATs) are the preferred diagnostic method due to their high sensitivity and specificity.

Gonorrhea screening: The CDC advises annual screening for gonorrhea in sexually active women under 25 years and older women at increased risk. MSM and individuals with HIV are also recommended to undergo regular screening. NAATs are the gold standard for gonorrhea diagnosis, providing reliable detection of the bacteria from various specimen types, including urine, urethral, cervical, and rectal swabs.

Management

The management of *C. trachomatis* and *N. gonorrhoeae* infections involves appropriate antibiotic therapy, partner notification and treatment, and preventive measures to reduce the risk of reinfection and transmission.

Treatment of chlamydia: The CDC's recommended treatment for uncomplicated chlamydial infections is azithromycin (1 g orally in a single dose) or doxycycline (100 mg orally twice daily for 7 days). For pregnant women, azithromycin is preferred due to its safety profile. Patients should be retested three months after treatment to ensure the infection has been cleared and to detect any reinfections.

Treatment of gonorrhea: Given the rising antibiotic resistance, the CDC currently recommends a dual therapy approach for uncomplicated gonorrhea: ceftriaxone (500 mg intramuscularly in a single dose) combined with doxycycline (100 mg orally twice daily for 7 days), particularly if chlamydial infection has not been excluded. Azithromycin, once a component of dual therapy, is no longer recommended due to increasing resistance. Follow-up testing is advised to confirm eradication of the infection, especially in cases of persistent symptoms or known exposure to resistant strains.

Correspondence to: Ditte Svend, Department of Radiation Biology, Aalborg University, Aalborg, Denmark, E-mail: Disvend@uae.se

Received: 01-Mar-2024, Manuscript No. SCPM-24-26299; **Editor assigned:** 04-Mar-2024, SCPM-24-26299 (PQ); **Reviewed:** 18-Mar-2024, QC No. SCPM-24-26299; **Revised:** 25-Mar-2024, Manuscript No. SCPM-24-26299 (R); **Published:** 01-Apr-2024, DOI: 10.35248/2167-0897.24.13.086

Citation: Svend D (2024) Strategies for Effective Screening and Management of Chlamydia and Gonorrhea: Current Approaches. Single Cell Biol. 13:086.

Copyright: © 2024 Svend D. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Partner notification and treatment

Partner notification and treatment are critical components of STI management. Sexual partners of individuals diagnosed with *C. trachomatis* or *N. gonorrhoeae* should be informed, tested, and treated if necessary to prevent reinfection and further transmission. Expedited Partner therapy (EPT), where healthcare providers prescribe treatment for the patient's partner(s) without a prior medical evaluation, is an effective strategy for managing these infections.

Prevention

Preventive measures are essential to reduce the incidence of *C. trachomatis* and *N. gonorrhoeae* infections. Comprehensive sexual education, consistent and correct use of precautions, and regular screening in high-risk populations are key strategies. Vaccines are

not currently available for either infection, highlighting the importance of preventive behaviors and early detection through screening.

C. trachomatis and *N. gonorrhoeae* infections remain significant public health concerns due to their high prevalence, asymptomatic nature, and potential for severe reproductive health complications. Effective screening, timely treatment, and preventive measures are potential in controlling the spread of these infections. Healthcare providers play a vital role in educating patients, ensuring adherence to screening guidelines, and managing infections with appropriate antibiotic therapy. Continued efforts in research and public health initiatives are needed to address the challenges posed by these common STIs, particularly the rising issue of antibiotic resistance in *N. gonorrhoeae*.