Infection with *Mycoplasma genitalium*
Clinical Guidelines, Sweden

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Background and clinical features

Mycoplasma genitalium causes urethritis in men and women, and cervicitis. *Mycoplasma genitalium* is, in many respects, similar to *Chlamydia trachomatis*, and theoretically has the same potential for complications. However, few prevalence studies have been made. Several Swedish studies have shown that, in sexually transmitted infection (STI) clinics, *Mycoplasma genitalium* is about half as common as chlamydia. In the general population, *Mycoplasma genitalium* has been detected in 25% of chlamydial prevalence studies in Denmark (1) and the USA (2). *Mycoplasma genitalium* is transmitted through sexual contact (3). Other transmission routes have not been identified.

Incubation period: No known data. As the bacteria grow extremely slowly, the incubation time may be longer than for *Chlamydia trachomatis*.

Symptoms and findings are due mainly to urethritis and cervicitis, and possible complications. Infection with *Mycoplasma genitalium* in men appears to be symptomatic to a greater extent than chlamydia (4).

Women: Purulent vaginal fluor, mucopurulent cervicitis, dysuria, genital itching, lower abdominal pain, bleeding disorders and signs of lower genital tract infection (LGTI).

Men: Urethral discharge fluor, dysuria, itch in the urethra, signs of epididymitis and prostatitis.

Women and men: Conjunctivitis, mono- and oligo-arthritis.

Complications

Mycoplasma genitalium causes endometritis and probably pelvic inflammatory disease. Several studies have demonstrated an association between tubal factor infertility and *Mycoplasma genitalium*. *Mycoplasma genitalium* has been reported sporadically in clinical epididymitis, prostatitis and conjunctivitis.

Laboratory diagnosis

Indications for testing

Current knowledge of the complications and prevalence of *Mycoplasma genitalium* infection is not sufficient to justify screening as for chlamydia.

Routine testing is recommended:

- when there are clinical signs of urethritis/cervicitis;
- of the partners of patients infected with *Mycoplasma genitalium* and/or with urethritis/cervicitis;
- when there are residual symptoms after *chlamydia treatment*, if tests for *Mycoplasma genitalium* have not been performed initially;
- as investigation in salpingitis, infertility, epididymitis and prostatitis.

Liberal sampling is recommended in cases of conjunctivitis, mono-and oligoarthritis, genital itching, bleeding disorder, other STIs, and repeated urinary tract infections (UTI), especially if urine culture is negative.

Sampling

Sampling is performed in the same way as the local routine for *Chlamydia trachomatis*.

Women: Swabs from vagina and/or cervix in first voided urine (10 ml). Vaginal swab alone may have insufficient sensitivity, as the number of bacteria in a *Mycoplasma genitalium* infection may be low.

Men: First voided urine (10 ml).

Laboratory diagnostics

Nucleic acid amplification testing (NAAT). Commercial tests are not yet available. Microscopy of wet smear and stained smears from the urethra and cervix often show an increased number of polymorphonuclear leukocytes (PML).

Treatment

Azithromycin is an antibiotic that has shown good treatment results. Tetracycline given in the same dose as in Chlamydial infection, with approximately 30% cure, is not effective in the treatment of *Mycoplasma genitalium* (5, 6).

Uncomplicated infection

The recommended dose of azithromycin is 500 mg × 1 on day 1, followed by 250 mg × 1 for the following 4 days.

Risk for the development of resistance is high if treatment with azithromycin 1 g is continued as a single dose. In cases

of suspected resistance positive samples should be sent for diagnosis of resistance to Jorgen Skov Jensen, Statens Serum Institut, Artillerivej 5, DK-2300 Copenhagen 5, Denmark.

In the event of treatment failure with azithromycin, moxifloxacin 400 mg × 1 for 7 days is recommended. Note that liver toxicity has been reported with moxifloxacin. There are no rules that permit fee waivers for the treatment of *Mycoplasma genitalium*.

Treatment during pregnancy

Avoid if possible during the first trimester. Azithromycin can be given in the second and third trimesters (www.lakemedelsverket.se, 3:2006).

Treatment of complications

Knowledge of possible complications and treatment are inadequate. Prolonged treatment 10–14 days is recommended.

Follow-up

Control 3–4 weeks post-treatment is recommended, especially in the case of inconvenience or when azithromycin 1 g or tetracycline was given as a single initial dose.

Reporting to authorities and contact tracing

Not governed under the Communicable Diseases Act.

Current sexual partner(s) should be offered treatment regardless of the test result. Epidemiologically, it is recommended to test sexual partners from the past year. Treatment should be given after positive test results.

References

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4. Jensen JS. Mycoplasma genitalium: the aetiological agent of urethritis and other sexually transmitted diseases. J Eur Acad Dermatol Venereol 2004; 18: 1–11.
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Comments to guidelines - edited by Tomas Norman Dam

Specific comments to this guideline were given by Carsten Sand. "Acceptance without comments" were received from the other Editors. The comments have been compiled into a summary edited and commented by CME editor Tomas Norman Dam. Further comments to the guidelines from Forum readers can be mailed to cme@medicaljournals.se and will be presented open for discussion in the next issue of the CME section.

General comments

According to the editors' responses there is no published guideline on this issue in any of the countries, but apparently the therapeutic approach is similar to that suggested in the guideline.

Comments on diagnostic approach

It was commented in agreement with the guideline that asymptomatic individuals should not be screened, but it is not clear whether mycoplasma test should be included in the STD screening package for patients presenting with urethritis or cervicitis. In Denmark mycoplasma genitalium screening as a second-line test, in patients presenting with non-gonococcal and non-chlamydial urethritis/cervicitis (Carsten Sand).

Editorial comments

Interestingly the article defines the Nucleic Acid Amplification Tests (NAAT) as standard and mention microscopy of wet smear and stained smears. (NAATs) are the most sensitive and specific tests currently available for the detection of

chlamydia. The sensitivity of NAATs are in the mid to high 90s, with specificity equal to cell culture (98-100%). While culture is the preferred test for medico legal cases, most experts have suggested that NAATs for chlamydia could be used as an alternative to culture if culture is not available. The PCR test currently used in most countries has the ability to include an internal amplification control that enables the laboratory to determine the presence of inhibitors that may produce a false negative result. The PCR test has the ability to prevent false positive results (contamination) from any previously amplified products (Tomas Norman Dam).

Tomas Norman Dam
CME editor

The Registration is Open for the 40th Annual Meeting of the European Society for Dermatological Research (ESDR) in Helsinki on September 8–11, 2010

One of the main yearly meetings for dermatologists, the ESDR meeting, will be held in Helsinki this September. The ESDR, founded in 1970, is a non-profit organization promoting basic and clinical science related to dermatology. The ESDR is the largest investigative dermatology society in Europe with a current membership of over 800, and its annual meetings have most recently attracted about 800 participants. The organizing committee is planning a stimulating scientific program for this year, not forgetting the clinical aspects which are especially brought up on sessions of the Clinical Saturday. A special satellite symposium "The Nordic Light in Dermatologic Research" will be arranged by Acta Dermato-Venereologica on Thursday, September 9, followed by a postgraduate course in memory of Professor Ulpu Saarialho-Kere, who was a member of the ESDR Board and the Local Organizing Committee until summer 2009. The organizers wish all participants from the Nordic countries most welcome to these symposia.

The congress venue Marina Congress Centre is ideally located at the harbourside right in the heart of Helsinki. The downtown on Helsinki with its lively market square, world class shopping, excellent dining and busy nightlife are located just a few steps from the congress venue. Accommodation is also available in the immediate proximity of the venue. Please mark your calendar with the abstract deadline, May 28th. Early registration ends on July 9th. http://www.esdr2010.org/

Fig. 1. The chairman of the Local Organizing committee Veli-Matti Kähäri with Aira Raudasoja from the congress bureau CongCreator promoting the Helsinki congress in the 39th Annual ESDR Meeting in Budapest in September 2009.

For the Local Organizing Committee of ESDR2010:
Veli-Matti Kähäri, Sirkku Peltonen, Annamari Ranki, Antti Lauerma, Kaisa Tasanen, Sari Suomela