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Update of the optimal usage guide on sexually transmitted and blood borne infections – confirmed *Mycoplasma genitalium* infection

English summary

Une production de l'Institut national d'excellence en santé et en services sociaux (INESSS)

Québec

SUMMARY

Update of the optimal usage guide on sexually transmitted and blood borne infections – confirmed *Mycoplasma genitalium* infection

Introduction

Mycoplasma genitalium is a sexually transmitted bacterium that exhibits a high rate of resistance to macrolides and emerging resistance to fluoroquinolones. *Mycoplasma genitalium* is listed on the watch list of CDC's Antibiotic Resistance Threats in the United States. However, the exact rates of resistance in Québec and in many other parts of the world are still not known at this time.

In 2021, the Institut national d'excellence en santé et en services sociaux (INESSS) published an optimal usage guide on the pharmacological treatment of confirmed *Mycoplasma genitalium* infections. Since then, new recommendations have been published because of this bacterium's increased resistance to commonly administered antibiotics. Updating the optimal usage guide on confirmed *Mycoplasma genitalium* infections therefore seemed relevant and useful for Québec's front-line clinicians.

Methodology

For the development and partial update of the optimal usage guide on confirmed *Mycoplasma genitalium* infections, a systematic review of clinical practice guidelines, expert consensus statements, consensus conference reports, guidance documents, and other documents containing clinical recommendations was conducted in accordance with INESSS's standards. The 2022 update focused only on pharmacological treatment. In addition, a manual literature search was performed by consulting the websites of North American regulatory agencies, health technology assessment agencies, government agencies, and professional associations and bodies dealing with the topic of interest. The bibliographies of the selected publications were examined for other relevant items.

The data were analyzed from the perspective of contextualizing Québec practice, using mainly legislative, regulatory, and organizational contextual information specific to Québec, and the perspectives of the different stakeholders who were consulted.

Results

Three items were selected from the 2020 literature search and two from the 2022 search that contain recommendations and that were of adequate methodological quality, based on the AGREE II instrument. In general, a few main principles guide the treatment of confirmed *Mycoplasma genitalium* infections. First, when the results of screening for macrolide or fluoroquinolone resistance mutations are known, antibiotic resistance should be considered when choosing a treatment for *Mycoplasma genitalium*. In addition, since the use of azithromycin can induce macrolide resistance, a new treatment with azithromycin on a multi-day regimen should not be prescribed to patients who did not

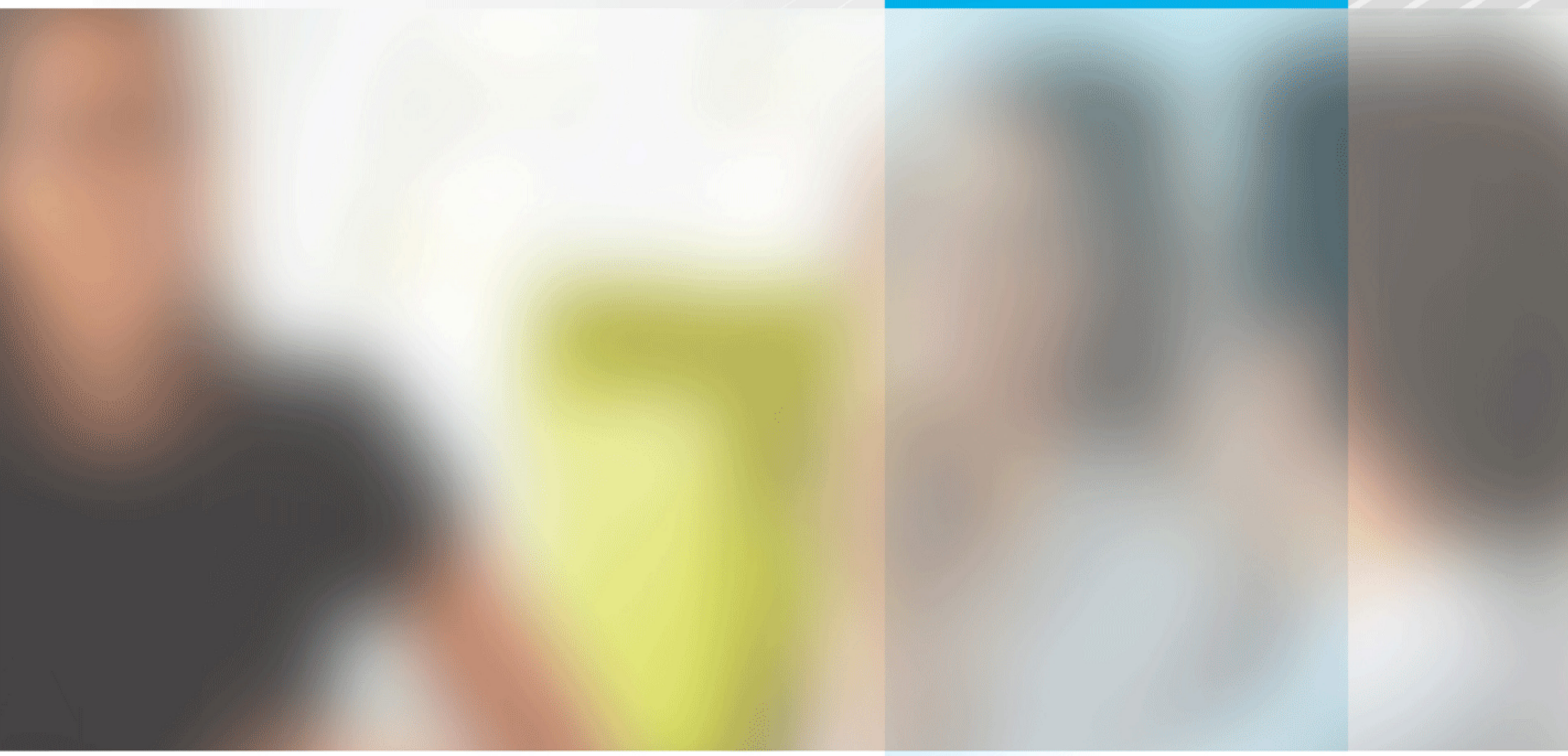
respond to this antibiotic during the initial treatment of a syndrome consistent with a sexually transmitted and blood-borne infection. In addition, the use of moxifloxacin as first-line therapy in all cases of confirmed *Mycoplasma genitalium* infection is not recommended because the other treatment options are limited. Moxifloxacin is recommended in cases of prior azithromycin use during syndromic therapy, suspected, or confirmed macrolide resistance, or a complicated infection. Sequential treatment with doxycycline before azithromycin or moxifloxacin (depending on macrolide resistance) should be recommended. Doxycycline appears to reduce the *Mycoplasma genitalium* bacterial load, which seems to promote the action of azithromycin and moxifloxacin. Lastly, for the treatment of a confirmed *Mycoplasma genitalium* infection in a pregnant or breastfeeding woman, the front-line clinician should consult an experienced colleague. The same applies to a current sexual partner who is pregnant or breastfeeding (partner of a person with a confirmed *Mycoplasma genitalium* infection).

For an uncomplicated *Mycoplasma genitalium* infection (cervicitis or urethritis), the recommended treatment depends on the patient's characteristics. For a patient in whom macrolide susceptibility has been confirmed or in the absence of data on macrolide susceptibility in a patient who has not received azithromycin during syndromic therapy, the recommended treatment is doxycycline (100 mg PO BID x 7 days) followed by azithromycin (1 g PO daily x 1 day, then 500 mg PO daily x 3 days, for a total of 2.5 g). The recommended treatment for a patient with suspected or confirmed macrolide resistance or who previously received azithromycin during syndromic therapy is doxycycline (100 mg PO BID x 7 days) followed by moxifloxacin (400 mg PO daily x 7 days). It should be noted, however, that if doxycycline has been used as first-line therapy for an uncomplicated infection and the microbiology test results show the presence of *Mycoplasma genitalium*, azithromycin or moxifloxacin should be administered as soon as possible after doxycycline therapy. Doxycycline should not be repeated when the interval between the completion of doxycycline therapy and the initiation of azithromycin or moxifloxacin is less than 14 days. Lastly, for a patient with suspected or confirmed fluoroquinolone resistance, it is recommended that an experienced colleague be consulted.

For the treatment of a complicated *Mycoplasma genitalium* infection (pelvic inflammatory disease or epididymitis/orchiepididymitis), it is also recommended that an experienced colleague be consulted. However, the antibiotic combination to be used should include moxifloxacin (400 mg PO daily x 14 days). Lastly, whether they have signs or symptoms, the patient's current partners should receive the same antibiotic therapy they are, unless the resistance data call for a different approach (empirical treatment).

Conclusion

The development and partial update of the optimal usage guide on confirmed *Mycoplasma genitalium* infections were based on scientific and clinical data and on clinical practice recommendations from the literature, which were enhanced with the perspectives of various clinicians and experts, and with contextual information. Evaluating the data from these different sources enabled us to develop the optimal use guide and update it considering the best available clinical practices.



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