

Community-acquired pneumonia in adults

Report in support of the optimal use guide

English summary

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

This is the English summary of the guidance entitled Pneumonie acquise en communauté chez l'adulte - Rapport en appui au guide d'usage optimal - published in September 2017.

The complete version of this guidance (in French) is available on the website of INESSS in the *Publications* section.

Équipe de projet

Auteur

Stéphane Gilbert, Ph. D.

Collaborateurs

Sonia Lantin, B. Pharm., D.P.C.

François Giguère, B. Pharm.

Ann Lévesque, Ph. D.

Coordination scientifique

Mélanie Tardif, Ph. D.

Direction scientifique

Sylvie Bouchard, B. Pharm., D.P.H., M. Sc., MBA

Repérage d'information scientifique

Mathieu Plamondon, MSI

Soutien documentaire

Flavie Jouandon

SUMMARY

Introduction

Pneumonia is an inflammation of the lungs generally caused by bacterial or viral infection. Every year, more than a million people in Canada develop pneumonia, making it the fourth leading cause of hospitalization in this country in 2014-2015 and the third leading cause in Quebec.

Despite advances in the overall understanding in the diagnosis and treatment of pneumonia, some uncertainties persist and require a close evaluation. For instance, severity assessment methods and biomarker use are emerging areas whose evolution could change the way pneumonia is treated. As well, the emergence of antibiotic-resistant bacteria constitutes a constant challenge for clinicians in terms of choosing the antibiotic to be prescribed.

A revision of the optimal use guide was therefore necessary to improve the prescription decision-making process and to foster optimal antibiotic use in the treatment of community-acquired pneumonia (CAP) in adults. The objective of this report is to present all the data gathered during INESSS's work in this regard and the recommendations developed to promote judicious drug use.

Methodology

This updated report is based on the best scientific data available aggregated by authors of clinical practice guidelines (CPG) and policies, combined with information derived from several recent systematic reviews on CAP. The updated guidelines have also been enriched with legislative and organisational information specific to Quebec, as well as the prevalence and resistance data for various bacterial strains, and the experiential knowledge provided by Quebec experts and clinicians who collaborated in the research. MEDLINE, EBM Review and Embase databases were systematically searched for CPGs, guiding principles, consensus conferences and systematic reviews. This literature search was restricted to CPGs published from member states of the G7 published in French or English between 2009 and 2016. A librarian also did a grey literature search on the Web sites of the Web Guidelines International Network (GIN) and of the National Guideline Clearinghouse (NGC). Official antibiotic monographs, approved by Health Canada, were also examined.

Results

Although usually bacterial in origin, community-acquired pneumonia has a considerable viral component (especially during the influenza season) and can also be mistaken with other viral respiratory infections (e.g., acute bronchitis), two scenarios in which antibiotic therapy is not required but for which a prescription is frequently written.

On the one hand, the section on diagnosis was expanded with a view to reducing the number of inappropriate prescriptions. First, a table of the signs and symptoms associated with CAP was added to fine-tune the diagnostic process. Next, biomarkers,

which are increasingly used in Europe, were evaluated during the update. However, in the current Quebec context, the tools needed to quickly obtain biomarker test results are not sufficiently available at outpatient clinics. Consequently, their use cannot be recommended in this guide. Radiography therefore remains the method of choice for confirming a diagnosis of community-acquired pneumonia. Lastly, Fine's score, which was used to assess CAP severity, was replaced with the CRB-65 severity score because of its simplicity and better specificity.

On the other hand, the options for first-line antibiotic therapy were reviewed in detail so that the best options can be offered to patients. Two types of treatment are now available: a "typical" treatment which is mainly intended to eradicate *S. pneumoniae*, with no effect on "atypical" bacteria, and an "atypical" treatment targeting a wider spectrum of pathogenic agents, but which poses an increasing risk of resistance in cases of infections caused by *S. pneumoniae*. Preference cannot be given to either of these two types of treatment in this guide. Rather, the choice should be individualized according to the situation faced by the clinician. It is still important to make a distinction between healthy individuals who contract pneumonia and those with significant comorbidities who require a more robust treatment. Consequently, the use of dual therapies combining amoxicillin with or without clavulanic acid and macrolides or doxycycline is recommended in this population. Furthermore, fluoroquinolones, which were previously offered as first-line treatments, have become an option of last resort because of the Food and Drug Administration (FDA)'s 2016 safety alert on them.

Conclusion

In conclusion, the section concerning diagnosis was improved to reduce the number of inappropriate antibiotic prescriptions issued for viral pneumonia or for viral diseases with similar symptoms. Similarly, the suggestion to use a more accurate severity assessment method and the recommendation not to use biomarkers are aimed at optimizing medical resource utilization. Lastly, the changes made with regard to the various antibiotic therapy options are aimed at putting at the clinician's disposal the best treatment options available in light of the situation and encouraging optimal antibiotic use and limiting the use of fluoroquinolones.

Siège social

2535, boulevard Laurier, 5^e étage
Québec (Québec) G1V 4M3
418 643-1339

Bureau de Montréal

2021, avenue Union, bureau 10.083
Montréal (Québec) H3A 2S9
514 873-2563

inesss.qc.ca

