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87 – Antibiotics in the Treatment of Sore Throat: not Indicated

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Introduction

A sore throat (ICPC R21) is a common reason for encounter in daily general practice. The incidence of sore throat is 22 per 1000 patient years (number of new episodes per year) and the prevalence is 20 per 1000 patient years (number of patients with the disease per year) according to Dutch general practice data (1). Most of the time, the pathology is a simple self-limiting viral infection. Although antibiotics are rarely indicated, they are often prescribed and there is a wide variability in prescribing antibiotics for a sore throat in Western Europe. Roughly speaking, there is a north – south axis: less antibiotics in the north, more in the south. But also in Northern Europe antibiotic prescribing varies widely between practices, suggesting further improvement possible. The urge is evident: antibiotic resistance is now recognized as a threat to global public health that requires immediate action. It has been estimated that antimicrobial resistance causes 25,000 deaths annually in the EU and costs 1,5 billion euros on health care costs (2). To lower inappropriate antibiotics prescribing, it is important to know what its drivers are. This column highlights two aspects of inappropriate prescribing, fear and cross-country differences, and describes available tools to GPs to reduce inappropriate antibiotics prescribing for acute sore throat.

Fear

As said, a sore throat is most of the time a simple illness (82% is viral (3)), that heals in a few days. Generally, with antibiotics in a week, without in 8 days and most of them even quicker. Fear of complications is one of the drivers for GPs to prescribe an antibiotic. However, multiple studies showed that antibiotic treatment of sore throat does not yield much in the prevention of complications, and only about 1 percent of people are at risk of complications (3,4). So far studies have not been able to find risk factors to identify those who are at a higher risk of complications. Furthermore, many complications such as otitis media and sinusitis are also self-limiting diseases and do not necessarily require antibiotics. So it is obvious that it is not effective to prescribe antibiotics to most patients with sore throat.

The GP's fear is a result of uncertainty about the diagnosis, which is daily practice for GPs. But also past experience of the GP plays a role (5). A previously missed serious condition may invoke the GP to prescribe antibiotics the next time the GP sees a patient with sore throat.

Besides the GP's fear, the (perceived) patient's fear also plays a role in antibiotic

prescribing. Like GPs, patients also act from previous experience with (or without) antibiotics. Research has shown that perceived patient demand increases antibiotic prescribing. Notably, perceived demand by GPs does not necessarily match patient's expectations.

Cross-country differences

A first factor causing differences in antibiotics prescribing between countries is the health system. In health systems that are "open" - any patient can go and shop any doctor – and there is a competition "to give more" or "to give quicker". It has indeed been shown that fewer antibiotics are prescribed in countries with a gatekeeping GP, where people are obliged to register with the GP they consult (6). This was also related to less antimicrobial resistance. Moreover, in some countries surveillance of over-the-counter antibiotics is weak, complicating the position of the GP. Guidelines are strong tools in promoting rational prescribing. Remarkably, the WONCA conference in 2001 already noted that guidelines from different countries differ in their advice to GPs. In four of six studied European guidelines acute sore throat is considered a self-limiting disease, and antibiotics are not recommended (7). In the two other studied guidelines diagnosis of streptococcus A is essential and prevention of rheumatic fever is an important reason to prescribe antibiotics. The studied guidelines promote different clinical approaches (Centor scoring/strep test, or assessing illness severity) and recommend different treatments (antibiotics or not). To reduce antibiotics prescribing it is important that GPs from all countries are able to judge whether or not to prescribe an antibiotic on the same sound basis of evidence.

Tests like the Centor criteria and the rapid strep test can help GPs in making the right diagnosis and supporting treatment decisions (see box 1 of a summary of guidelines for when to use these tests). Usage of these tests differs between countries. In the Nordic countries, a Strep-test is a daily feature, while it is absent in most other countries. Also the introduction of a C Reactive Protein-test is more prominent in the Nordic countries, and absent in the others. Availability of these tests, presence in guidelines, but also cultural issues, such as authority and uncertainty avoidance may play a role in whether these tests are used or not.

The GP's toolkit

GPs have access to several tools to reduce antibiotics prescribing. However, before using these, they need to ensure that their knowledge on sore throat and the need for antibiotics is up to date.

GP-patient communication: Uncertainty is a feature of GP diagnostics and everyday reality, clear advice to the patient on signs of complications, expected duration of disease and actions to increase comfort of the patient are more helpful than antibiotic prescribing. Although this may take more time than prescribing an antibiotic, research shows that consultation rates decrease in practices that decrease their antibiotic prescribing rates.

Delayed prescription: Give a prescription, but advise to take it only if disease progresses further. This has been shown to reduce antibiotics use.

Point of care tests: Centor criteria can help to identify patients with an increased likelihood of a streptococcal A infection. Rapid strep test can then be used in those with more than 3 Centor criteria to test for the presence of a streptococcal A infection. However, usefulness of the strep test is debated as the prevalence of (asymptomatic) streptococcal carriers is high.

Box 1. Summary of ESCMID guideline for Acute sore throat (2012 (8))

Guidelines for treatment of sore throat differ between countries. The European Society for Clinical Microbiology and Infectious Disease wrote an evidence-based guideline for diagnosis and treatment of acute sore throat. Recommendations are restricted to uncomplicated acute sore throat in adults and children in Europe. The guideline advises:

- not to give antibiotics to patients with less severe presentation of sore throat (i.e. 1 or 2 Centor criteria¹);
- to weigh the modest benefits of antibiotics against the side effects for patients with severe sore throat (3 or more Centor criteria);
- prevention of suppurative complications is not an indication for antibiotic treatment;
- if antibiotics are indicated, penicillin V, twice or three times daily for 10 days is recommended.

¹Centor criteria is a scoring system to identify patients with a higher likelihood of group A streptococcal infection for use in adults and children. It is based on the following criteria: Temperature >38°C, no cough, tender anterior cervical adenopathy, tonsillar swelling or exudate, age 3-14 years, +1 point each; age 15-44 years, 0 points; age >44 years, -1 point.

Take Home Message

- Antibiotics are generally not indicated for acute sore throat
- Complications of sore throat are uncommon
- Investing time in explaining patients sore throat is a self-limiting disease may lead to fewer sore throat related consultations
- Guidelines on the management of sore throat differ between countries

Original Abstract

<http://www.woncaeurope.org/content/ab382-%C2%A0-%C2%A0-%C2%A0-%C2%A0-management-acute-sore-throat-european-guideline>

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