



ORIGINAL ARTICLE

Estimated saving of antibiotics in pharyngitis and lower respiratory tract infections if general practitioners used rapid tests and followed guidelines



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KEYWORDS

Audit;
Respiratory tract infections;
Antibiotics;
Point-of-care test

Abstract

Introduction: General practitioners (GP) in Spain do not have access to rapid tests and adherence to guidelines is usually suboptimal. The aim of the study is to evaluate the estimated number of antibiotics that could have been saved if GPs had appropriately used these tests and had followed the guidelines.

Design: Observational study.

Setting: Primary care centres from eight Autonomous Communities in Spain.

Participants: GPs who had not participated in previous studies on rational use of antibiotics.

Intervention: GPs registered all the cases of pharyngitis and lower respiratory tract infections (LRTI) during 15 working days in 2015, by means of a 47-item audit.

Main measurements: Actual GPs' antibiotic prescription and estimated number of antibiotics that could have been saved according to recent guidelines.

Results: A total of 126 GPs registered 1012 episodes of pharyngitis and 1928 LRTIs. Antibiotics were given or patients were referred in 497 patients with pharyngitis (49.1%) and 963 patients with LRTI (49.9%). If GPs had appropriately used rapid antigen detection tests and C-reactive protein tests and had strictly followed current guidelines, antibiotics would have been given to 7.6% and 15.1%, respectively, with an estimated saving of 420 antibiotics in patients with sore throat (estimated saving of 84.5%; 95% CI: 81.1–87.4%) and 672 antibiotics in LRTIs (estimated saving of 69.8%, 95% CI: 67.1–72.5%).

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PALABRAS CLAVE

Auditoría;
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rápido

Conclusions: GP adherence to guidelines and a correct introduction of rapid tests in clinical practice in Spain could result in a considerable saving of unnecessary prescription of antibiotics in pharyngitis and LRTIs.

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Ahorro estimado de antibióticos prescritos en faringitis e infecciones del tracto respiratorio inferior si los médicos de atención primaria usaran pruebas rápidas y siguieran las guías de práctica clínica

Resumen

Introducción: Los médicos de familia (MF) en España no tienen acceso a pruebas rápidas y la adherencia a las guías clínicas es subóptima. El objetivo del estudio es evaluar el número estimado de antibióticos que podrían ahorrarse si los MF hubiesen usado las pruebas correctamente y hubieran seguido las guías.

Diseño: Estudio observacional.

Emplazamiento: Centros de atención primaria en 8 Comunidades Autónomas.

Participantes: MF que no habían participado en estudios anteriores sobre uso racional de antibióticos.

Intervención: Los MF registraron los casos de faringitis e infecciones del tracto respiratorio inferior (ITRI) durante 15 días en 2015, mediante un audit de 47 ítems.

Mediciones principales: Prescripción real de antibióticos realizada por los MF y antibióticos que se hubiesen ahorrado en base a las guías clínicas.

Resultados: 126 MF registraron 1.012 faringitis agudas y 1.928 ITRI. Se prescribieron antibióticos o fueron derivados 497 pacientes con faringitis (49,1%) y 963 con ITRI (49,9%). Si los MF hubiesen usado pruebas rápidas de detección antigénica y proteína C reactiva y hubieran seguido las directrices, se hubieran dado antibióticos al 7,6% y al 15,1%, respectivamente, con un ahorro estimado de 420 antibióticos en pacientes con faringitis (84,5%; IC 95%: 81,1-87,4%) y 672 antibióticos en pacientes con ITRI (69,8%, IC 95%: 67,1-72,5%).

Conclusiones: La adherencia de los MF a las guías clínicas y una correcta introducción de las pruebas rápidas en la práctica clínica en España podrían reducir de forma considerable la prescripción innecesaria de antibióticos en la faringitis aguda y en las ITRI.

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Introduction

Most clinical guidelines recommend antibiotic prescribing for patients with sore throat when the infection is severe and in patients with group A β -haemolytic streptococcus (GABHS) infection.¹ However, identifying patients with GABHS only on clinical grounds is difficult. Most countries recommend the use of rapid antigen detection tests (RADT) in patients with suspected streptococcal infections as this practice has been associated with a reduction of inappropriate use of antibiotics.² Spanish guidelines recommend these tests to be performed specifically in patients with at least two Centor criteria – history of fever, tender cervical nodes, pharyngeal exudates and/or absence of cough.³ When it comes to lower respiratory tract infections (LRTI), systematic reviews have suggested that antibiotics do not make any difference in the course of influenza and modify the course of acute bronchitis only marginally.^{4,5} However, they are recommended in acute exacerbations of chronic obstructive pulmonary disease (COPD), mainly when purulent sputum is present and in

all cases of pneumonia.⁵ Identifying patients with pneumonia has also shown to be challenging in primary care when it is only based on symptoms, signs and examination.⁶ Used as an adjunct to clinical examinations by general practitioners (GPs) the C-reactive protein (CRP) rapid test has also shown to reduce antibiotic use in these infections.⁷

Despite the compelling evidence about the benefits of having these rapid tests in primary care, their availability in Spanish surgeries is scarce. However, GPs in our country prescribe antibiotics in over 60% of cases of acute pharyngitis and acute bronchitis.⁸ Inappropriate antibiotic use has adverse medical consequences and contributes to microbial antibiotic resistance.⁹ We carried out a European-funded study aimed at promoting the rational use of antibiotics. In 2015 we selected a sample of GPs who had never used rapid tests in their consultations and compared the use of antibiotics with the current clinical guidelines estimating the number of antibiotics that could have been saved if GPs had appropriately used these tests and had followed the guidelines properly.

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