



ORIGINAL ARTICLE

Diagnosis and treatment of acute pharyngitis—Is there any benefit on ten-day course of antibiotics?☆☆☆

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KEYWORDS

Pharyngitis;
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Abstract

Introduction: In group A streptococcal (GAS) pharyngitis, a ten-day course of amoxicillin is recommended. However, short-course treatments seem to be equally effective. The aim of this study was to retrospectively evaluate and compare the outcome of patients treated with 7-day course and 10-day course of amoxicillin.

Materials and methods: Retrospective analysis of all GAS pharyngitis admitted to a pediatric emergency department in 2014. Demographic variables, the application and results of the rapid antigenic diagnostic test (RADT), treatment, complications and return in the next 30 days were analyzed. Two groups were defined for comparative analysis according to the duration of treatment with amoxicillin: A) short-course (up to 7 days) and B) long-course (10 days).

Results: Were included 989 GAS pharyngitis. The median age was 5.2 years, 50.1% male. Amoxicillin was the most prescribed antibiotic (94.9%) with a median duration of 7 days. 10-day course therapy was prescribed in 31.9% of the cases. There were no differences between short and long-course treatment groups regarding age ($p=0.600$), gender ($p=0.429$) and complications ($p=0.436$). Considering the endpoint "return to the emergency department", we concluded that up to 7 days of treatment was non-inferior to 10 days of treatment.

Conclusion: The most commonly prescribed antibiotic was amoxicillin, but a 10-day course was prescribed in few cases. In our analysis there seems to be no benefit with long-course treatments with amoxicillin in GAS pharyngitis.

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PALABRAS CLAVE

Faringitis;
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Diagnóstico y tratamiento de la faringitis aguda. ¿Hay alguna ventaja en la pauta de antibióticos de 10 días?**Resumen**

Introducción: En casos de faringitis por estreptococo grupo A (EGA) se recomienda una pauta de 10 días de amoxicilina. No obstante, parece que pautas de menor duración resultan igualmente efectivas. El objeto de este estudio fue evaluar y comparar de manera retrospectiva la evolución de pacientes tratados con pautas de amoxicilina de 7 y 10 días de duración.

Materiales y métodos: Análisis retrospectivo de todos los casos de faringitis por EGA atendidos en un servicio de urgencias en 2014. Se analizaron variables demográficas, uso y resultados de pruebas de detección rápida de antígeno (PDRA), tratamiento, complicaciones y reingreso en un plazo de 30 días. Se definieron 2 grupos para el análisis comparativo basados en la duración del tratamiento con amoxicilina: A) pauta corta (hasta 7 días), y B) pauta larga (10 días).

Resultados: Se incluyó a 989 casos de faringitis por EGA. La edad mediana fue 5,2 años, el 50,1% fue de sexo masculino. La amoxicilina fue el antibiótico más prescrito (94,9%), con una duración media de 7 días. Se prescribieron pautas de 10 días al 31,9% de los pacientes. No se encontraron diferencias entre los grupos con pautas cortas y largas en cuanto a la edad ($p=0,600$), el género ($p=0,429$) o las complicaciones ($p=0,436$). Concluimos que en lo referente a la variable de resultado «regreso al servicio de urgencias», la pauta de 7 días no es inferior a la de 10 días.

Conclusión: El antibiótico prescrito con mayor frecuencia fue la amoxicilina, aunque solo se prescribió pauta de 10 días en unos pocos casos. Nuestro análisis no encontró beneficio aparente del tratamiento de larga duración con amoxicilina en casos de faringitis por EGA.

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Introduction

Acute pharyngitis is a very common upper respiratory tract infection in children. Its etiology is, in most cases and at any age, of viral origin, however it may have a bacterial cause. *Group A streptococcus* (GAS) is the most common bacterial agent, being responsible for about 20–30% of the total cases of acute pharyngitis in the pediatric age.^{1,2}

The diagnosis of GAS pharyngitis based only on clinical criteria is unreliable.¹ For a correct diagnosis of GAS pharyngitis, in order to avoid the inadequate prescription of antibiotics (AB), the rapid antigenic diagnostic test (RADT) or the oropharyngeal culture is recommended, except for cases of scarlet fever with the typical rash.^{3–5} Despite sensitivity of 70–90%, the RADT has a specificity of 95% or greater, so a positive result can obviate the need for culture which takes hours or even days to be available.¹

Most international guidelines recommend the prescription of AB when GAS pharyngitis are confirmed by RADT and/or culture. Most of them advocate amoxicillin or penicillin as a first-line AB, since GAS has been universally susceptible to β -lactams.³ However, treatment failures have been reported from 12% to almost 40% in some regions of the world, perhaps because of the presence of β -lactamase-producing bacteria presented in the oral environment such as *Staphylococcus aureus*, *Haemophilus influenzae*, *Moraxella catarrhalis*, and anaerobes.⁶

Regarding the therapeutic with amoxicillin, a 10-day course therapy is recommended in order to obtain the highest rate of GAS eradication in the oropharynx, with a symptomatic improvement after 24–48 h of treatment.³ However, there is evidence that short-course treatments,

up to 7 days, seem to be equally effective with both clinical and bacteriological cure. These schemes seem to have more advantages such as increased therapeutic adherence and smaller costs of treatment.^{2,4,7–10}

The aim of this study was to retrospectively evaluate and compare the outcome of patients treated with 7-day course and 10-day course of amoxicillin.

Material and methods

An exploratory study was performed, with a retrospective analysis, through the consultation of the clinical processes, using SClínico[®] and PEM[®] (Electronic Medical Prescription). We included all GAS pharyngitis admitted to a pediatric emergency department (PED), during a 12 month period (January to December 2014). This general PED is the reference emergency for the central region of Portugal, with about 60 thousand attendances annually and with admission allowed until the age of 18 years.

All patients with the diagnosis of GAS pharyngitis or scarlet fever were included. A diagnosis of GAS pharyngitis was considered when there was a positive test or culture or in the presence of scarlet fever.

Patients with another concomitant diagnosis that justified the beginning of AB therapy and patients taking AB at the time of diagnosis were excluded.

We analyzed demographic variables, the application and results of the RADT, treatment with AB (type and duration), complications in the 5 weeks following the diagnosis (peritonsillar, parapharyngeal or retropharyngeal abscess, acute otitis media, sinusitis, acute rheumatic fever,

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