

Is acute rheumatic fever causally associated with a 6-day antibiotics therapy for pharyngitis?



To the Editor:

Fabi et al present 98 consecutive cases of acute rheumatic fever (ARF) observed in a single hospital in the Emilia-Romagna Region of Italy.¹ They concluded that 49% of the patients developed ARF despite having received antibiotic treatment for pharyngitis and that a 10-day course of antibiotics is needed to prevent ARF.

The design of the study, a case series, does not allow an inference to be drawn about the association between the duration of antibiotic treatment and the development of ARF. The number of patients treated for pharyngitis who have not developed ARF is unknown in this type of study. In addition, the study design does not allow an evaluation of whether the observed cases of ARF are above the expected number or the direction of the temporal trend. There is a lack of description of the review methods for data extraction from medical records and there is a risk of misclassification, because the presence of symptoms related to pharyngitis is known only for 71 patients whereas antibiotic treatment is reported for all 98 cases without specifying the timing of antibiotic treatment: patients may have been treated for other causes and/or at other times and may have been incorrectly classified as being treated for pharyngitis.

The authors also did not provide an overall view of the different approaches and evidence available for the treatment of pharyngitis. There are different approaches in developed countries to treat pharyngitis; among others, delayed antibiotic treatment or a short course of amoxicillin are recommended.²⁻⁴ A systematic review of antibiotic treatment for streptococcal pharyngitis shows that a short course of late generation antibiotics (including amoxicillin) is equally effective as a 10-day course with oral penicillin in terms of bacteriological and clinical efficacy, but it ensures higher compliance.⁵ Evidence showing that antibiotics are effective for the prevention of ARF is based largely on moderate-to low-quality studies without concealment of treatment, carried out in the 1950s in a population at high-risk of ARF (recruits of the US Army), using intramuscular penicillin for 1-5 days.^{6,7} There is no evidence when considering treatment with oral antibiotics.

In our opinion, the results of the study by Fabi et al do not justify updating the guidelines that recommend different therapeutic approaches for pharyngitis such as delayed antibiotic treatment or short course of amoxicillin.^{2,3}

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