MEDDOCS Open Access Publisher

ISSN: 2637-9627

Annals of Pediatrics

Open Access | Letter to Editor

Self-Medication with Antibiotic in Children in Morocco During Covid-19 Pandemic

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Received: Sep 30, 2021

Accepted: Oct 28, 2021

Published Online: Oct 30, 2021

Journal: Annals of Pediatrics

Publisher: MedDocs Publishers LLC

Online edition: http://meddocsonline.org/

Introduction

Self-medication is defined as "The use by people for themselves or for their relatives, on their own initiative and without the advice of a doctor, of drugs considered as such and having received the Marketing Authorization"[1].

Few studies have been published on self-medication in pediatrics, whether it is to assess the importance or the risks to children. Drug intoxications in pediatrics represent 40% of accidental intoxications due to errors the use of medications [2]. It also exposes to risks of allergy, drug interactions and wrong diagnosis.

Objectives

The objectives of our survey are to evaluate the prevalence of self-medication in pediatrics and to identify the circumstances of its use during Covid-19 pandemic.

Materials and methods

This is a descriptive cross-sectional study; conducted using a questionnaire on the child's age, symptomatology, antibiotic taken, socio-professional level of the parents and the supply of the medication. Questions were open or closed, with one answer or multiple choice. The questionnaire was strictly anonymous. It was carried out during 04 months of the period which extends from May 2021 to August 2021.

Cite this article: Mouaddine K, Mekaoui N, Dakhama B, Karboubi L. Self-Medication with Antibiotic in Children in Morocco During Covid-19 pandemic. Ann Pediatr. 2021; 4(2): 1084.

Statistical analysis was performed by Jamovi software; Quantitative variables were expressed as means, standard deviations and medians. Categorical variables were expressed as numbers and percentages.

Results

524 people responded to the questionnaire: The prevalence of self-medication was 93.5%. The average age of our patients is 6.9 years. Mothers were involved in 60% of self-medications versus 38% of fathers. The symptoms in children that justify the use of antibiotics were represented by: Angina in 40% of cases, fever in 33%, cough in 8%, sore throat in 5%, urinary burning in 3.2% and otitis in 2% of patients.

The antibiotics used were mainly amoxicillin in 42.7% of cases, amoxicillin-clavulanic acid in 33% of cases, macrolide in 11.8% of patients and cefixime in 6%.

Only 6.5% of respondents report not using antibiotics without a prescription. The antibiotic was supplied from the pharmacy in 83% of cases, available at home in 10.5% of patients.

Discussion

This survey showed that the prevalence of self-medication was higher than other studies such as the one conducted in Yemen, where the prevalence was 60% [3]. This is explained by the accessibility of most drugs, especially antibiotics, in pharmacies without prescription in our country.

This rate mainly concerned parents with a high socio-professional level (87% were university graduates).

In France, the prevalence of self-medication among children is high: 80% [4]. A study on the self-medication of 12-year-old children carried out in 2010 in the same country showed that 96% of the parents questioned had already self-medicated their child [5].

The age group of the patients ranged from 0 to 15 years, with a predominance of the age group (05y-10y) in 40% of the cases. This compares with the Yemeni study, where the dominant age group is (01 year -05 years) [3].

An online survey was conducted in Australia, was conducted at the height of the initial outbreak and revealed that 19.5% of participants took antibiotics to protect themselves from COVID-19. The preventive use of antibiotics was facilitated by the lack of understanding of antibiotics, inappropriate practices of use of the latter. The psychological distress induced by the COVID-19 pandemic was significantly positive linked to self-medication [6].

The main problem with self-medication with antimicrobials is the emergence of pathogenic resistance. Antimicrobial resistance is an existing problem world-wide, mainly in developing countries, where antibiotics are often obtainable without prescriptions [7]. The increase in antibiotic resistance in developing countries is of current public concern as it results in multiple resistant organisms leading to infections not easy to treat.

Self-medication with antibiotics also occurs in Europe, mainly in southern and Eastern European countries [8]. Some studies in the USA have also revealed considerable self-medication with antibiotics obtained from leftovers from previous courses, at a local pharmacy or outside the country [9].

The most common reasons for self-medication were colds and upper respiratory tract symptoms, which are self-limiting and mostly caused by viruses. The determinants of self-medication with antibiotics in low-income countries mainly include over-the-counter sale of antibiotics, the cost of medical consultation, lack of agreement with medical practitioners, and misconception concerning the effectiveness of antibiotics [3].

Conclusion

The prevalence of self-medication with antibiotics in children in developing countries such as Morocco is alarmingly high. The majority of patients presented with respiratory and oto- rhinological manifestations and the commonly prescribed antibiotics were amoxicillin and amoxicillin-clavulanic acid. Most drugs were obtained from pharmacies and drug stores without the need for a prescription. Therefore, intervention from health authorities is urgently needed to stop this practice and to avoid side effects and microbial resistance.

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