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Research Article

SURVEY ON HOW ANTIBIOTICS ARE DISPENSED IN COMMUNITY PHARMACIES IN ALBANIA

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ABSTRACT

Introduction: Misuse of antibiotics is perceived as a real problem in Albania. And in recent years it has attracted the attention of grey literature in the country. Quantitative analysis of consumption showed a relatively high antibiotic us. The pharmacists were tested on their tendency to dispense antibiotics without prescription.

Methodology: A random survey was conducted for this study. Statistical analyses were made with OpenEpi®. Research group personnel were instructed to ask the question "I need to get a package of amoxicillin", when posing as simulated patients in pharmacies. The main outcome of the study was considered percentages of approval of this request.

Results: Out of 450 pharmacies visited in this survey, in 259 pharmacies tested the request for dispensing antibiotic without production was approved (80% of tested pharmacies, Confidence Levels 75.57% - 84.26%). Generally some questions (like age or possible allergies) were asked from pharmacists before approving the request of dispensing the antibiotic without prescription. The results of the survey suggest that dispensing of antibiotics without prescription is very common in **Albania:** The research group personnel were generally asked for further information before approving the request.

Conclusions: Different actions should be taken in the country to enhance compliance with regulation and protocols regarding dispensing antibiotics. These actions can be focused on regulatory enforcement and also in enhancement of awareness on antibiotic misuse and microbial resistance through public campaigns or targeted messages to professionals.

Keywords: Drug Utilization; Antibiotics; Pharmacies; Professional Practice; Patient Simulation; Albania.

INTRODUCTION

Antimicrobial resistance has become a worldwide issue present in every country. [1,2] Annually, global health policies rank antimicrobial resistance as an international priority.[3,4] In the last two decades World Health Organization has adopted necessary guidelines to measure quantitative antibiotic use at different levels.[5,4] This analysis is necessary in determining the extent and seriousness of antibiotic resistance.[6] Aware that turning back is not an option; possible preventions of antibiotic resistance are monitoring misuse and prudent use of antibiotics.[7]

Policy-making bodies in collaboration with researchers have focused on the standardizing of necessary measures for the control of antibiotic misuse.[7,8] These measures are in proportion to the regions use of antibiotics and the need for interference.[4] Health professionals have an important role in minimizing the misuse of antibiotics by prudent prescribing and dispensing.[9,10] Pharmacy professionals not only have a duty in controlling prescriptions or implement drug counselling,[11] but also in preventing self-treatment of patients. [12,13]

Misuse of antibiotics is perceived as a real problem in Albania. Recently misuse of antibiotics has caught the attention of gray literature.[14] The main causes which can lead to misuse are over prescription and dispensing of antibiotics without prescription.[15,16] Under the current

legislation Albanian pharmacists are prohibited to sell antibiotics without prescriptions.[17] Unfortunately, it has been noted that Albanian pharmacists do not always follow the legislation.[14]

The aim of our study was to make a survey focused on the dispensing of antibiotics without prescription in the community pharmacies in the country. The pharmacies were tested for their tendency to dispense antibiotics without prescription.

METHODS

A random survey was conducted for this study. The targeted pharmacists were selected from the list of community pharmacies extracted from the National Register of Licenses in the country in June 2013. The sample size was calculated with OpenEpi® online software (population 1408 active pharmacies, confidence interval 95%, and sample size 302 pharmacies). The research group decided to select randomly a sample of 450 community pharmacies using Excel®. The pharmacies selected were visited and tested during the period of June 2013 - September 2014.

Research group personnel were instructed to ask the question "I need to get a package of amoxicillin", when posing as patients in the pharmacies. The personnel was also instructed to use this low risk profile to answer to follow up questions from pharmacists (if any were asked): gender: male; age: 30; symptoms: sore throat, temperature: yes; allergies: no. This pattern was selected in order to present a low risk profile regarding toxicity or allergy, because the study was focused only in misuse of antibiotics.

The main outcome of the study was evaluated as the percentage of approval of dispensing the antibiotic without prescription. Statistical analyses were made with OpenEpi®. Follow up questions were noted and a simple percentage analysis was done to evaluate the proportion of the pharmacists that did any follow up questions. A paper review was made in PubMed and other generic search engines on the related study.[11]

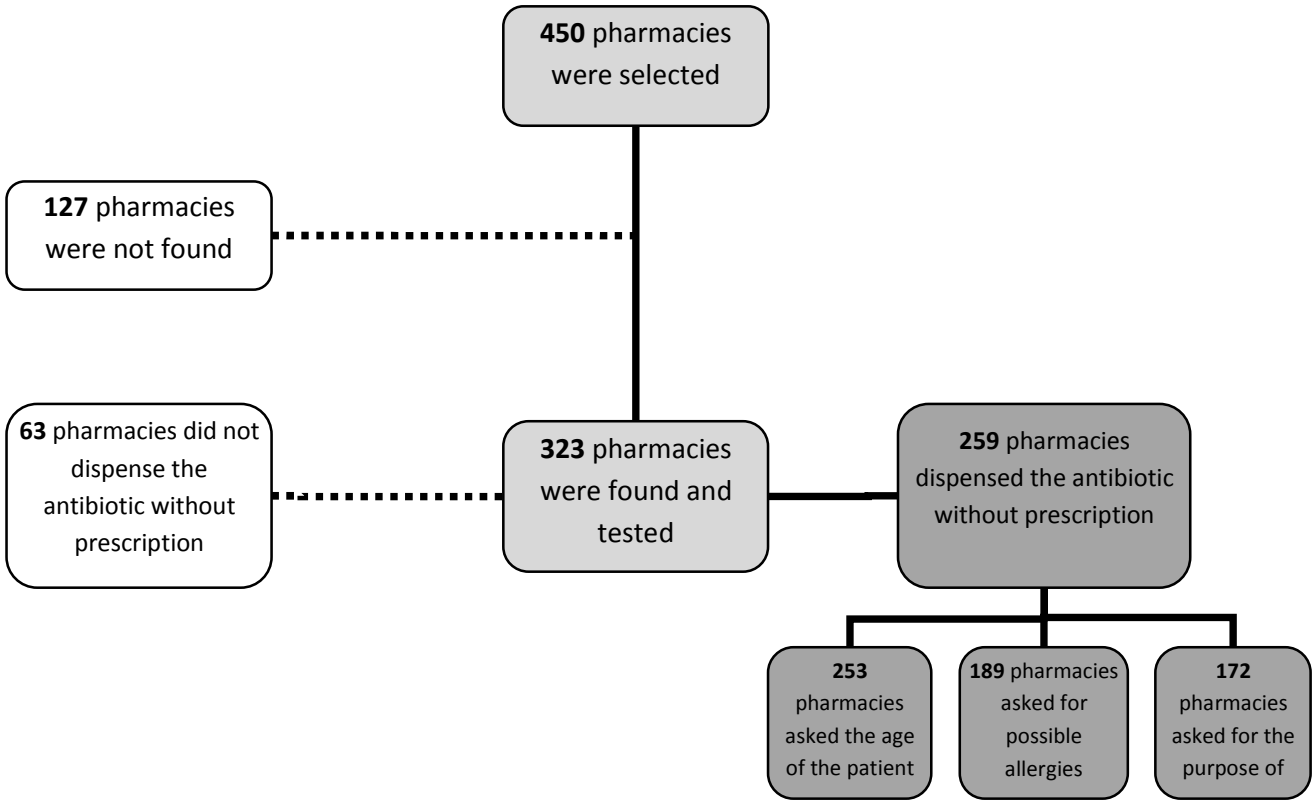

Figure 1. Survey resulsts

RESULTS

Out of 450 pharmacies visited in this survey, only 323 (71.7%, higher than the sample size calculated) were found and tested by the research group personnel. 127 (28.3%) pharmacies were not in the indicated position, were closed, or were just too difficult to be found, so it was not possible to test them. In 259 pharmacies tested, the request for dispensing antibiotic without prescription was approved (80% of tested pharmacies, Confidence Levels 75.57% - 84.26%).

Generally some questions were made in pharmacies before approving the request of dispensing the antibiotic without prescription. In 253 (97.6%) pharmacies the age of the patient was asked, before dispensing the requested antibiotic. In 189 (58.5%) pharmacies, the pharmacist asked the patient about any possible allergies and also previous use of the specific product he/she was requesting. In 172 (53.2%) pharmacies purpose of use and further information on the symptoms and medical signs of the presumed infections was asked.

DISCUSSION

It is the first time that a study is focused on analyzing the dispensing of antibiotics without prescription in the community pharmacies of the main cities of Albania. According to the current Albanian legislation, all drugs, except approved over the counter drugs, must be sold with prescription.17

The results of the survey (80% of the pharmacists) suggest that dispensing of antibiotics without prescription is very common in Albania. The profile that we presented to the pharmacists was a low risk case that could be interpreted as cold, flu or bacterial infection. However, since there was no diagnosis, this case should not have affected the dispense of antibiotics without prescription. 18

The main follow up questions that were asked by the pharmacists were the age of the patient, possible allergies and some medical symptoms. These concerns are related more to the safe use of antibiotics rather than the rational use of them.

Inappropriate antibiotic dispense by community pharmacists in Albania is at concerning levels. In 2012, tasks force for monitoring the drug dispensing from pharmacists was created, but it was a short-lived action. Currently little is done in this direction. Sporadic cases from the grey literature have been noted; however no studies have been done in this direction. [14]

CONCLUSIONS

Different actions should be taken in the country to enhance compliance with regulation and protocols regarding dispensing antibiotics. These actions can be focused on regulatory enforcement and also in enhancement of awareness on antibiotic misuse and microbial resistance through public campaigns or targeted messages to professionals. New methods must be developed for pharmacists to improve their professional practice. Adopting national guidelines in good pharmacy practices is a needed step in this direction.

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