

A Qualitative Study Exploring Role Of Community Pharmacy In The Irrational Use And Purchase Of Non-prescription Antibiotics In Al Ahsa

Promise Madu Emeka¹, Mokhtar Jawad Al-Omar², Tahir Mehmood Khan³

ABSTRACT

Antibiotics are drugs used to treat bacterial infections, but they can cause more harm than good when not used properly. Reports have shown that non-prescription sale of antibiotics is prevalent in all communities of the world. However, the role of community pharmacy in ensuring the safe use of antibiotics in this region has not been evaluated as bacterial resistant pattern are changing, according to reports. This study was carried out in order to identify the non-prescription use/ dispensing of antibiotics and pharmacists attitude in ensuring safe use of antibiotics in the community. A qualitative study design was adopted to interview fifteen pharmacists practicing on the community pharmacies in eastern region, Al-Ahsa, Kingdom of Saudi Arabia. Data obtained was coded independently for the relevant themes. Findings demonstrate that consumers often request for the antibiotics without prescription, especially the antibiotics i.e amoxicillin and ciprofloxacin. Most of them purchase based on their personal experience either for prophylaxis or to get relief from the symptoms. Diarrhea and itching are the only adverse event that the pharmacists have noticed among the consumers. The current study reveals significant incidence of misuse and malpractice regarding antibiotic sale by community pharmacies in Al-Ahsa.

Key words: Antibiotics, non-prescription, community pharmacy, consumer, Al-Ahsa

ÖZET

Antibiyotikler bakteriyel enfeksiyonları tedavi etmek için kullanılan ilaçlardır, fakat uygun kullanılmadığında yarardan çok zarara neden olabilirler. Raporlar göstermiştir ki dünyanın tüm toplumlarında reçetesiz antibiyotik satımı yaygındır. Ancak, yayınlara göre bakteriyel direnç paternleri değiştiğinden, bu bölgede antibiyotiklerin güvenli kullanımının sağlanmasında toplum eczanelerinin rolü araştırılmamıştır. Bu çalışma antibiyotiklerin reçetesiz kullanım/dağıtımını ve eczacıların toplumda güvenli antibiyotik kullanımını sağlamadaki davranışlarını ortaya koymak amacıyla yapılmıştır. Bir niteliksel çalışma dizayını, Saudi Arabistan Krallığı, Al-Ahsa, doğu bölgesindeki toplum eczanelerinde çalışan 15 eczacı ile mülakat yapma şeklinde planlanmıştır. Elde edilen veriler ilgili temalar için bağımsız kodlandı. Bulgular gösterdi ki müşteriler sıklıkla reçetesiz antibiyotik almak istemekteler, özellikle amoksisilin ve siprofloksasin gibi antibiyotikleri. Bunların çoğu kişisel deneyimlerine dayanarak profilaksi amaçlı veya semptomlarını geçirmek amacıyla ilacı satın alırlar. İshal ve kaşıntı eczacıların müşterilerinde dikkat ettikleri tek yan etkilerdi. Mevcut çalışma toplum eczacılarının Al-Ahsa'da antibiyotik satışı ile ilgili belirgin yanlış kullanım ve görevi kötüye kullanma sıklığını göstermiştir.

Anahtar kelimeler: Antibiyotikler, reçetesiz, toplum eczacıları, müşteri, Al-Ahsa

¹Department of Pharmaceutical Science, College of Clinical Pharmacy, King Faisal University, Eastern region Al Ahsa, Kingdom of Saudi Arabia. ²Doctor of Pharmacy (Pharm.D) 4th Year Student, College of Clinical Pharmacy, King Faisal University Eastern region Al Ahsa, and Kingdom of Saudi Arabia. ³Department of Pharmacy Practice, College of Clinical Pharmacy, King Faisal University, Eastern region Al Ahsa, Kingdom of Saudi Arabia.

Correspondence: Promise Madu Emeka

Department of Pharmaceutical Science, College of Clinical Pharmacy, King Faisal University, Eastern region Al Ahsa, Kingdom of Saudi Arabia.

INTRODUCTION

Antibiotic consumption is a key factor to resistance although the relationship is complex (1). Antibiotics are perhaps the most commonly prescribed anti-infective agents by both public and private health-care sectors with 9.55 defined daily dose (DDD)/1,000 population/day. The penicillin group is the most commonly used, accounting for 47% of the total use of antibiotics (2).

Overuse of antibiotics has been reported even though the majority of these infections are caused by viruses, against which antibiotics have no clinical benefit (3,4). Furthermore, a considerable body of evidence has demonstrated cursory knowledge and negative attitudes and beliefs among consumers which may influence the antibiotic usage (5-10). In the year 2000, the World Health Organization (WHO) report three key issues for public participation in emergence of drug resistance to: 1- improving access to medical services; 2- reducing unnecessary use of antimicrobial drugs and taking a full course of treatment; and 3- not sharing medication with other people or keeping part of the course for another occasion (11). Therefore, modifying public attitudes and improving the knowledge of the people regarding antibiotics use will fall squarely on the shoulders of health care providers especially pharmacy outlets, the source of these drugs. This will be an important strategy to preserve antibiotic effectiveness in the era of resistance.

In Al Ahsa region of Saudi Arabia, the role of community pharmacy in ensuring the safe use of antibiotics in this region has not been evaluated as bacterial resistant pattern are changing. Thus this study sought to identify the non-prescription use/ dispensing of antibiotics in community pharmacy and pharmacists attitude in ensuring safe use of antibiotics in eastern province, Al Ahsa Region. Findings of this study will provide further insight in planning and developing strategies for local health education purposes.

MATERIAL AND METHODS

A qualitative study design was adopted for this study. Respondents for this study were the pharmacist practicing on the community pharmacies Al-Hofuf (AH) eastern region, Al-Ahsa, Kingdom of Saudi Arabia.

Study Sample

Fifteen pharmacists practicing on the community phar-

macies were approached for interview. A qualitative study design was adopted because it allows a flexible exploration of respondents' attitudes and experiences. A semi-structured interview guide was developed and used during the interview process after thorough reviewing of the literature. Fifteen community pharmacists were interviewed using the pre-defined themes.

The interviews focused on the following issues: routinely dispensed antibiotics without prescription, adverse events due to the antibiotics use over the counter and pharmacist advice to the antibiotic consumers. The pre-testing of the interview guide was evaluated using five pharmacists. Participants' demographic data were collected by using a self-administered questionnaire which was attached with the consent form. The same open-ended questions were asked to all interviewees and appropriate probing questions were used when necessary to draw out information required for the study from each of the respondents. Each interview lasted about 20 to 30 minutes and was conducted at a place and time convenient for the pharmacist in charge of the community pharmacy. All responses obtained during the interviews were audio-taped and at the end of interview were transcribed verbatim. The authors verified the tapes for its accuracy of transcription and then manually transcribed line by line for the relevant theme.

Ethical Approval

A written consent was taken from the community pharmacists and the relevant hospital in charge to participate in the interview. The college of clinical pharmacy, King Faisal University, approved the study protocol. Any information that exposes the identity of the interviewee was avoided.

RESULTS

Fifteen pharmacists have participated in this study. A convenient sampling method was adopted to interview the pharmacists. Nearly all the interviewees were expatriates (Egyptian) holding a bachelor degree in pharmacy (B.Pharm). In terms of job experience about 5 (33.3%) were with a job experience 2-3 years, while others 10(76.7%) were with a job experience more than five years.

Three themes were defined from the results of this study. The contents and results of the themes are ex-

plained as follow; Theme one; routine non-prescription sale of antibiotic on pharmacy.

Theme one has focused on the routine of the consumer to request antibiotics over the counter. Overall, it is seen that consumer request the non-prescription antibiotics very often.

Q- How often people come to your pharmacy to ask for antibiotics without prescription

Ph-1,4,6,8: Yah People they come very often to request antibiotics without prescription

Ph-3,5,7,8,9,11,14,15: they often come and ask about antibiotics

Q- Have you ever inquired the reason why they are purchasing antibiotics

Ph-1,4: they come often coughing or with temperature.

Ph 8,11 they come and purchase only when they ill.

Ph 14 many people come and ask medication for prophylaxis only, especially when there is a change in the weather.

Ph 6, 9, 15: they come and tell me about their previous experiences to use the same antibiotics for the current symptoms. Ph 13 mostly they purchase on their previous experiences.

Ph 7,10,12: they come and ask for a antibiotics for their illness and most of the time I suggest them an antibiotic that suits best as per their needs or symptoms.

Q- What are the most common antibiotic requested by the consumer without a prescription

Ph 3,5,9,11 Hum mostly they ask for Ampicillin or Amoxil®

Ph 4,6 they often come and ask for Ampicillin and Ciprofloxacin

Theme two: Side effects due to self-medication with antibiotics

The main aim of this section was to inquire the pharmacist about the adverse events reported by the consumers due to self-medication of antibiotics. In addition, the pharmacist was also questioned about the strategy adopted to manage any side effects reported due to the non-prescription antibiotics or due to the antibiotics recommended by them.

Ph 3,5, Diarrhea and rash are sometime seen with the

use of Amoxil ®

Ph 7, itching was sometime reported with the use of Ciprofloxacin

Q- In The Case If A Side Effect Is Noticed What You Will Do

Ph 3,5, Treat the symptoms because we need antibiotic to for the disease, these side effects are common and doesn't need recommendation to an expert

Ph 7, Replace the antibiotic that result side effects

Theme three: Pharmacist advice to the self-medicators

This section has explored the pharmacist advise to the self-medicators about the safe use of antibiotics.

Q-What you advise to the patients that come to purchase an antibiotic

Ph 2,3: I advise them that they Should complete the course even if the symptoms are relieved

Ph5: My main advice is always about the possible drug-food interactions, because it important, otherwise the rationale to use that antibiotic will be not be attained.

Ph9: Only take antibiotics when necessary

Ph 11: No need to take same antibiotics for different condition, every condition have a specific antibiotics. Irrational use of antibiotics may result in tolerance

Ph 13,15: Don't use antibiotics when there is cold , flu or nasal congestion

DISCUSSION

Result showed that the respondents were all qualified Pharmacists with Bachelor of Pharmacy and job experience ranged from 1 to 7 years post qualification. From the study the respondents disclosed that a significant number, purchase antibiotics very often without prescription. As in the recent study of Bin Abdulhak et al (12), nonprescription use of antibiotics in Saudi Arabia is still rampant and further highlights the dangers of their irrational use without any formal check. Majority of the pharmacists disclosed that they sold more of ciprofloxacin to patients; some of these bought it on their advice, while the rest sold without prescription. This study further revealed that some of the consumers request antibiotics for preventive purposes. This goes to reveal that pharmacist encouraged the purchase

of these antibiotics, acting more like sales man than professional health care providers. It is disturbing even more so as observed from this study that particular types of antibiotics, ciprofloxacin and ampicillin are sold as an all-purpose treatment for bacterial infections. From the studies conducted in Saudi Arabia by Memish et al., (13), they reported the changing pattern of all strains of *Streptococcus pneumoniae* resistance to penicillin, while Akhtar, et al (14) also documented an increase of bacterial resistance to ciprofloxacin using hospital isolates thus contributing to increase of resistance outbreak with the use of these agents. Part of the findings also was that pharmacist reported that most of the patients have no idea what type of antibiotics they were buying and therefore had no idea of either resistance problem or adverse effects. This attitude places the entire health of the population at risk of widespread drug resistance. Various other reports in Saudi Arabia have also shown that the pattern of microbial resistance is changing (15-17), and this will continue to an alarming level if not controlled. This will affect cost of treatment and hospitalization followed by a serious consequent emergence of multi-drug resistance strains in the likelihood of MRSA (18-22). These strains of resistant bacterial emerged due to irrational use of antibiotics particularly in the communities affected. Furthermore, the results showed that some of the pharmacists have observed adverse reaction associated with the use of antibiotics. On the question of observed adverse effect, most of the pharmacists said that they would treat the symptoms while continuing the antibiotics although few of them said they would counsel against the use of antibiotics without prescription. It then shows that counseling on use of antibiotics is grossly lacking and so people continue to purchase these antibiotics to their detriment. This observation was in accordance with the report of Bin Abdulhak et al (12). Overall, it is seen that there is an easy access for the consumers to the antibiotics in the eastern region. Community pharmacist was found willing to dispense the consumer demand which is against the rules and regulation for the dispensing of antibiotic in the kingdom.

In conclusion, the current study reveals significant incidence of misuse and malpractice regarding antibiotic sale by community pharmacies in Al-Ahsa, which may lead to changing pattern of microbial resistance in the region. It will be beneficial to undertake a detailed study of the pattern of drug resistance in order to as-

certain the real situation of resistance caused by irrational use of antibiotics in Saudi Arabia, in general and Al-Ahsa region especially. There should be a need to correlate this type of behaviour with drug resistance rate in our community. Attempt should also be made to instill an attitude of safe antibiotic use through training of community pharmacists and enlightenment campaigns of the risk factors associated with the development of multi-drug resistance through non-prescription use.

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