Self-Medication of Antibiotics Use among Private Pharmacies Visitors in Coast Hadhramout Governate - Yemen

التطبيب الذاتي لاستخدام المضادات الحيوية بين مرتادي الصيدليات الخاصة في ساحل- محافظة حضرموت - اليمن

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Abstract :

Backaround: *Self-medication miaht certainly albeit aradually lead to self-killina in the worst cases. Accordina to the world health oraanization. the Self- medication is defined as "selection and use of medicines bv individuals (or a member of the individuals' family) to treat self-recoanized or self-diaanosed conditions or symptoms"(1).*

The main problem with self-medication with antibiotics is the emeraence of pathoaenic resistance which is an existina problem world-wide .Some studies in the USA have also revealed considerable self - medication with antibiotics obtained from leftovers previous courses. at a local pharmacy or outside the country (2).

The problem of self-medication is widely spread in developing countries; Yemen is one of this country .In Yemen the quality of healthcare services isn't in a good condition. and it needs areat efforts to be developed the private sector's pharmacies are the most accessible health facilities and people can obtain most types of medication without prescription makina the self-medication easv to be practiced. A previous study was conducted in Yemen about the antibiotics self-medication amona the children and showed hiahlv alarmina percentaae representina 60% (1, 2).

In Our study we will explore the prevalence of self-medication of antibiotics use without medical prescription amona private pharmacies visitors in Coast Hadhramout governate –Yemen

Obiective: *To assess the self - medication of antibiotics use amona private pharmacies visitors in Coast Hadhramout aovernate –Yemen.*

Subject and Methods: *A cross sectional descriptive study was conducted on private pharmacies in different areas of Coast Hadhramout aovernate was carried out from October to December 2015 which was usina self-administered questionnaire amona 300 private pharmacies visitors selected randomlv.*

Results: *This study shows that the prevalence of self-medication of antibiotics use without medical prescription is hiahlv percentaae 85%. which amoxicillin is the most used self-prescribed antibiotic and previous prescription use (74%) is the most common self-medication of antibiotics information source. Difficulty of accessing health services is the main reason for the self-medication among private pharmacies visitors in Coast Hadhramout aovernate.*

Conclusion: *The present study indicate that self-medication of antibiotics practice has been common amona private pharmacies visitors in our local community. so we recommend to the ministrv of health to do more efforts to make close observation for private pharmacies to prevent aivina medications without prescription.*

Key Words: *Self medication, Antibiotics, Private pharmacies visitors , Hadhramout, Yemen.*

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الملخص باللغة العربية:

المقدمة: التطبيب الذاتى قد يؤدى ولو تدريجيا إلى قتل النفس كأسوأ الحالات. ووفقا لتعريف منظمة الصحة العالمية، فان التطبيب الذاتى هو "اختيار واستخدام الأدوية من قبل الأفراد (أو أحد أفراد الأسرة) لعلاج الحالات بحسب المعرفة الذاتية أو تشخيص الذاتى أو الأعراض"(١).

يعتبر ظهور المقاومة المسبة للأمراض من المشاكل الرئيسية للتطبيب الذاتى مع مضادات الميكروبات وهى مشكلة موجودة في جميع أنحاء العالم، ولا سيما في البلدان النامية، كما ك شفت بعض الدراسات في الولايات المتحدة الأمريكية عن وجود التطبيب الذاتى مع المضادات الحيوية التى يتم الحصول عليها من مخلفات او بقايا سابقه للصيدليات المحلية من خارج الدولة (٢)

وفي الختام، أصبح انتشار مشكلة التطبيب الذاتي على نطاق واسع في البلدان النامية؛ ومن بينها اليمن. وفي اليمن فان نوعية خدمات الرعاية الصحية ليست في وضع جيد، وتحتاج الى جهود كبيرة لتطويرها.

فالصيدليات في القطاع الخاص هي المرافق الصحية التي يمكن الوصول إليها ويمكن للناس الحصول على معظم أنواع الأدوية بدون وصفة طبية مما يجعل التطبيب الذاتي أسهل في استخدامه. وقد أجريت دراسات السابقتين في اليمن حول المضادات الحيوية التطبيب الذاتي بين الأطفال وأظهرت النسبة المخيفة للغاية التي تمثل ٦٠٪.(٢,١)

وهكذا، كان الهدف الرئيسي من هذه الدراسة إلى استكشاف مدى انتشار استخدام المضادات الحيوية بدون وصفة طبية (تطبيب ذاتي) بين مرتادي الصيدليات الخاصة في الساحل - محافظة حضرموت - اليمن .

هدف الدراسة: هو تقييم التطبيب الذاتى لاستخدام المضادات الحيوية بين مرتادى الصيدليات الخاصة في الساحل -محافظة حضرموت - اليمن

تصميم ومنهج الدراسة: تم استخدام دراسة وصفية، خلال الفترة من اكتوبر الى ديسمبر ٢٠١٥وذلك باستخدام الاستبيان الذي وزع على ما مجموعه ٣٠٠عينة عشوائية من مرتادى الصيدليات الخاصة في ساحل محافظة حضرموت – اليمن.

النتائج: اظهر التحليل الإحصائى للبيانات في الدراسة ارتفاع نسبه انتشارالتبيب الذاتى في استخدام المضادات الحيوية بدون وصفة طبية ٨٥٪ ،حيث ان الاموكسيسلين هو اكثرالمضادات الحيويه استخداما ذاتيا وتعتبر الوصفات السابقه هى مصدر المعلومات للتطبيب الذاتى. صعوبه الوصول للخدمات الصحية هى من الاسباب الرئيسية للتطبيب الذاتى بالمضادات الحيوية بين مرتادى الصيدليات الخاصة في ساحل - محافظة حضرموت من العينة الذين يستخدمون المضادات الحيوية.

الاستنتاجات والتوصيات : تشير هذه الدراسة إلى اتساع مدى انتشاراستخدام المضادات الحيوية للتطبيب الذاتى بين مرتادى الصيدليات الخاصة في ساحل - محافظة حضرموت – اليمن ، لذلك نوصى وزارة الصحة بتكثيف جهودها في مراقبة الصيدليات الخاصة لكى تحد من استخدام المضادات الحيوية بدون وصفة طبية.

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Introduction:

Self-medication might certainly albeit gradually lead to self-killing in the worst cases. According to the world health organization ,the self- medication is defined as "selection and use of medicines by individuals (or a member of the individuals' family) to treat self recognized or self-diagnosed conditions or symptoms"(1).

The growing global resistance to antibiotics and the documented health problems related to their inappropriate use, may have major public health policy implications. Antibiotics resistance is dramatically increasing worldwide in response to inappropriate antibiotic use (2,9). The main reasons for the increase of antimicrobial resistance include unregulated drug availability, inadequate antimicrobial drug quality assurance, inadequate surveillance, and widespread attitude to antimicrobial misuse, including self-medication (9). The prevalence of self-medication in different countries ranges from low percentage in Ethiopia 26.2% ، Bambui 54%,(4). Palestine (56.0%),(3). to high percentage in Indonesia 60% (1,5). , Brazil 86.4%,(1,6). UAE 89.2% (1,7). Finally in Slovenia 94.9 %.(1,8) .

There are many dangers of self-medication as reported in some studies such as the incorrect self-diagnosis of diseases or health problems, incorrect dose of drugs, incorrect duration and frequency.(1).

In developing countries, antibiotic consumption appears to be increasing steadily due to expanded population, and improved access to health care. In contrast with developed countries, where outpatient antimicrobials are largely restricted to prescription-only use(10,11,12).

The deficit of self-medication data is the lack of clinical assessment of the condition by a qualified medical professional, which could result in overlooked diagnosis and hindrances in appropriate treatments (1).

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The aim of this study is to examine the prevalence of antibiotics use without medical prescription among private pharmacies visitors in Coast- Hadhramout Governate- Yemen .

Subject and Methods: A cross sectional descriptive study was conducted on private pharmacies in different areas of Coast Hadhramout governate was carried out from October to December 2015 which was using self-administered questionnaire among 300 private pharmacies visitors selected randomly..

Research design: A descriptive retrospective design was used with purposive sampling

Setting: This study carried out between pharmacies visitors, in random selected six private pharmacies in Rural Mukalla (2 private pharmacies) , Alhami(2 private pharmacies), and Gail bawezir (2 private pharmacies) cities in Coast Hadhramout governorate , Yemen.

Sampling: The study sample included randomly selected 300 private pharmacies visitors,

who take antibiotic without prescription (self-medication) from six different private pharmacies each Pharmacy would be 50 visitors randomly choosing .

Data collection procedure: Self-administrated questionnaire was designed, which included the following:

1. The personal data (age, sex , level of education) of the private pharmacies visitors.
2. Prevalence of Self-Medication of antibiotics use among private pharmacies visitors in Coast Hadhramout governate- Yemen.
3. The most common self-medication of antibiotics use among private pharmacies visitors in Mukalla, Alhami, and Gail bawezir city
4. Principles of self - medication of antibiotics use.
5. The main reasons of private pharmacies visitors take antibiotics without prescriptions
6. Pharmacies visitors source of information about Self-medication of antibiotics drugs.

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Data Processing and Statistical analysis:

All data collected was entered into a personal computer, using SPSS program version 18.0 and analysis purpose. Descriptive statistics such as frequencies and percentage were calculated, and then study results were presented in tables as appropriate.

Ethical Consideration: All participates were assured that information collected will be used for scientific and research purpose only.

Privacy and confidentiality of their information was respected during analysis the self –administrated questionnaire

Results: Three hundred respondents were approached for participation. All of them provided complete information. The demographic characteristics of the respondents are presented in **Table (1).** In our study, most of the participants were males (74%), and (26%) were female, and their prevalence rates for taking antibiotics without a prescription were (87%) ,(13%) respectively. On the Other hand, the majority percentage of the age was between (25 - 35) years (47%,) and their prevalence rates for taking antibiotics without a prescription were the highest percentage (50%). But according to level of education, secondary school was the highest percentage which (42%) and their prevalence rates for taking antibiotics without a prescription were (49%)

Among the participants ever treated with antibiotics , **Figure (1)** shows that (15%) reported using prescribed antibiotics, while 85% reported non-prescribed use. The prevalence rates for taking antibiotics without a prescription were the highest percentage .From statistical analysis for data obtained in this study showed that self-medication of antibiotics use among private pharmacies visitors in Coast Hadhramout governate -Yemen was a serious problem in our local community which was 85% .

Figure (2) shows that the majority of non-prescribed antibiotics are amoxicillin, cefadroxil, ampiclox , ampicillin, tetracycline and ciprofloxacin. It is reported that amoxicillin is the most used self-prescribed antibiotic of the study among private pharmacies visitors in Coast Hadhramout In Rural Mukalla city is reported that cefadroxil

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is the most used self-prescribed antibiotic of the study respondents (46%), on the other hand, Amoxicillin was the highly used non-prescribed drug (33%) in Gail bawzeer, and in Al-hami (27%).

Figure (3) shows that the most common self-medication of antibiotics information source among private pharmacies visitors in Coast Hadhramout governate was previous prescription use (74%) and the pharmacist advice was (56%)but the least source of medication reported by the participants was T.V representing only (20%).

Nearly 40% of respondents prescribed an antibiotic completed the course; however, More than half (61%) reported that they did not finish their last antibiotic course as prescribed because they felt better. On the other hand, (50.7%) changed the antibiotic If it did not make them feel better that results shows in **table (2).**

The main reasons of self-medication of antibiotics use (without prescriptions) that shows in **table (3)** the participants vary in responding to the causes of self-medication The highest percentage was for ". The difficulty of accessing health services" as compared to the lowest percentage "No trust in medical doctor". This statistical.

Table (1): Socio-demographic characteristics of participants:

Socio- demographic characteristics among private pharmacies visitors	Frequency	%	Prevalence percentage of taking antibiotics
Age:			
≤ 25years	84	28%	26%
25-35years	141	47%	50%
35-45 years	66	22%	20%
≥45 years	9	3%	4%
Gender:			
Male	222	74%	87%
Female	78	26%	13%
Level of Education :			
illiterate	36	12%	20%
Primary	36	12%	10%
Secondary	126	42%	49%
Bachelors	102	34%	21%

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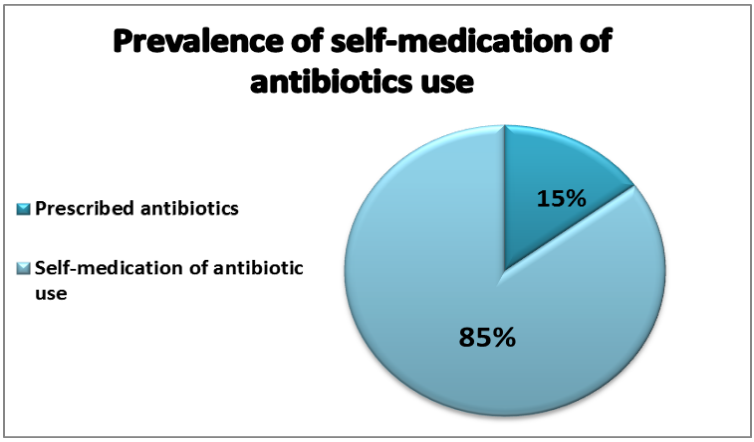

Figure (1): Prevalence of self-medication of antibiotics use among private pharmacies visitors in Coast Hadhramout governate

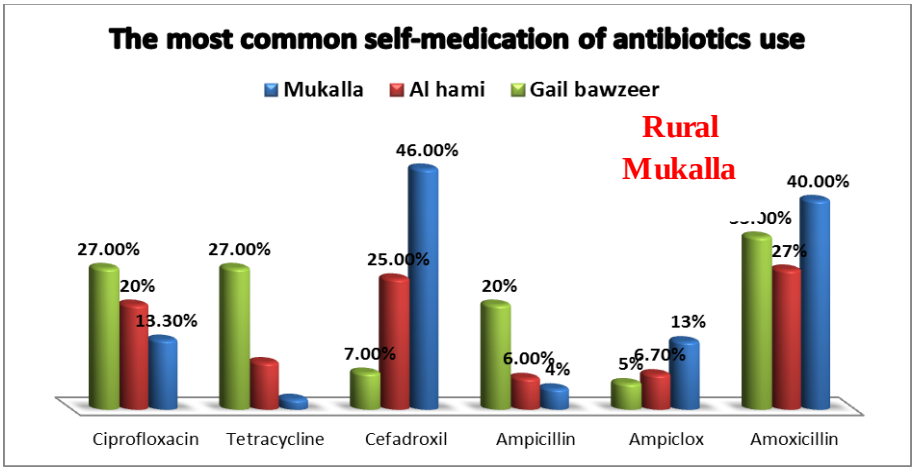

Figure (2): The most common self-medication of antibiotics use among private pharmacies visitors in Coast Hadhramout governate- Yemen.

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Table (2) Self-medication reported principles of antibiotics use:

Principles of self - medication of antibiotics use	Frequency		%	
	Yes	No.	Yes	No.
1) I stop taking the antibiotic when I feel better	183	117	61%	39%
2) I change the antibiotic if do not feel better immediately	152	148	50.%	49.3%
3) I take antibiotics as prescribed by my physician/pharmacist (complete the course)	120	180	40%	60%

Table (3): The main reasons of self-medication of antibiotics use (without prescriptions)

The main reasons of self-medication of antibiotics use (without prescriptions)	Agree		Neutral		Disagree	
	Freq.	%	Freq.	%	Freq.	%
1.Drug supply in hospitals was unavailable	226	75.3%	49	16.4%	25	8.3%
2.Availability of medicine without prescription	247	82.2%	29	9.8%	24	8%
3. The difficulty of accessing health services	252	84.1%	32	10.7%	16	5.2%
5. Uses of drugs in emergency cases	203	67.7%	23	7.6%	74	24.7%
6. High costs of treatment	222	74%	50	16.6%	28	9.4%
7. Busy schedule	188	62.8%	57	18.9%	55	18.3%
8.Have Enough knowledge	187	62.3%	50	16.8%	63	20.9%
9.No trust in medical doctor	66	21.5%	45	15%	191	63.5%
10.Previous experience with disease and treatment	195	64.9%	58	19.3%	47	15.8%

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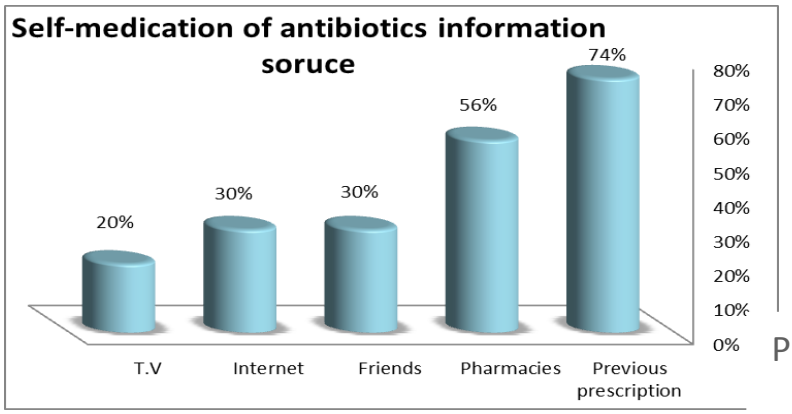

Figure (3): Self-Medication of antibiotics information source use among private pharmacies visitors in Coast Hadhramout governate-Yemen.

Discussion:

Self-medication is the treatment of common health problems with medicines that are taken on patient's own initiative or on advice of a pharmacist, without professional supervision. It is now becoming a common practice in many countries mainly due to lack of access to health care, easy availability of OTC drugs in market and poor drug regulatory practices. (13).

Concerning the demographic characteristics, of the respondents were the prevalence in various age groups (25-35) years (50%,) genders males (87%), and education levels secondary school (49%). The prevalence rate of self-medication practice was 85% during the last three months (prior to data collections) which was higher than what have been reported in countries like Nepal 59%, Bambui 54%, Mexico 34%,Ethiopia 26.2%, 61.2% Pakistan, Indonesia around 60%, Honk Kong of China 63.1%, Palestine 56.0%, Malaysia 62.7%, Puduchery in India 71% and finally in Uganda 75%.but This result is in agreement with the Self-medication practice among Yemeni patients in Ibb city (1).

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In our study the most common antibiotic used self medication by private pharmacies visitors in coast Hadhramout was amoxicillin This result agree with study by Khalid A Bashrahil (2002) in Yemen he reported that highest percentage of the common antimicrobial drugs used as over-the- counter in Hadhramout was amoxicillin (39.40%) (22)..This finding is similar to study done by Greek study (Mitsi et (2005) that showed Amoxicillin was the most more frequently purchased antibiotic without prescription. (21).

Self medication is frequently associated with very short courses and inappropriate drug and dose choices (4,17,18). The respondents in this study, 61% of them did not complete the course of antibiotic therapy when they feel better and changed to other antibiotic, there by promoting antibiotic resistance. These findings correspond to other studies confirming that patients often do not adhere to their treatment. A patient survey in 11 countries across the world showed that 22.3% of patients who received antibiotic medication admitted to not finishing the therapy (4,19) .Moreover, patients may store antibiotics from uncompleted courses, even beyond the expiration date, and later self-administer these drugs for self-diagnosed conditions or dispense them to family members and friends (4,20)

The respondents in this study identified several reasons for the self-medication, including that the highest percentage was ". The difficulty of accessing health services" as compared to the lowest percentage "No trust in medical doctor". This result is in agreement with the result reported by Alghanim S.(2011) (23). More than two thirds of the participants reported that the "previous prescriptions (74%)" was the main source of information for self medication, More than half of the participants explained that they depend on the pharmacies or Nursing advice in self-medications. This result is in agreement with the previous results reported which confirmed that pharmacies and previous prescriptions are the main sources of information. (1,14,15,16).

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Conclusion :

The present study indicate that self-medication of antibiotics use among private pharmacies visitors in Coast Hadhramout governate was be a serious problem in our local community, so we recommend to the ministry of health to do more efforts to make close observation for all pharmacies(private and government) to prevent giving medications without prescription

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