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EVALUATE THE ATTENDANCE OF PATIENTS TOWARD ANTIBIOTICS USE IN JORDAN

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ABSTRACT

Background

All over the world, antibiotics are the most commonly prescribed medications.[1] This contributes to increase antibiotic resistance which negatively affecting patients.[2] Patient misuse of antimicrobials is a major factor in the spread of antimicrobial resistance worldwide.[3,4,5]

Antibiotic misuse and overuse occurs due to a complex interaction of many factors related to patient knowledge and attitudes, such as patient needs; bad habits of self-medication; experience and knowledge of patients in the field of antibiotics and poor patient education.[6,7,8] Knowing and understanding patients' attitudes and practices toward antibiotics can help maintain antibiotic efficacy.[9-12]

Therefore, we was conducted a survey to assess patients' knowledge, attitudes, and practices regarding antimicrobial use and resistance.

Purpose

The questionnaire was conducted to assess the knowledge, attitude, and practice of patients on antibiotic use.

Material and method

Study Design, Period, and Setting

A cross-sectional survey study was conducted in patients who visit Prince Rashed Hospital internal and surgical clinic.

Sample Size and Sampling Technique

A sample size of 100 were calculated using a formula developed by Daniel and Cross with the assumption of 5% margin of error (d), 95% confidence level ($z\alpha/2 = 1.96$),

All respondents who attend in this hospital during march 2023 and were conducted in the study are included, while those unwilling to conclude in the study are excluded. The study respondents choose using a simple random sampling technique.

Data Collection Tools and Procedure

A validated structural questionnaire was design by researcher through review of comparable studies. Then, it translated to Arabic language. The survey contains five sections with 30 questions. The four sections focused in sociodemogragic characteristics, attitude toward antibiotics, practice toward antibiotics and knowledge toward antibiotics.

A health expert commissioned to collect the data and the data carrier was translated into Arabic. Study participants received written informed consent with questionnaire. Data from uneducated participants will collect through face to face. The data collectors then collected the questionnaires completed by the study participants and the accuracy of the questionnaires was verified. After completion, the questionnaires coded with the questionnaire number.

Methods of Measurement (Scoring)

Each correct answer received 1 point based on an assessment of knowledge and practice, and 0 points awarded for incorrect or questionable answers. Responses to opinion questions rated on a 3-point Likert scale, with 1 representing "disagreement" and 3 representing "agree". Averages above and equal to the average indicate better knowledge, best practices and positive attitudes, while values below the average indicate negative experiences bad habits.

Data Quality Control

The content of the data collection tools based on the pilot study changed slightly. The subject matter exerted then

review and evaluate the questionnaire on content, design, relevance, and comprehensibility

Statistical Data Analysis

The answer options for the knowledge and practice items will binary. Likert-type responses used in questions about attitudes. The Social Sciences Statistical Package (SPSS 23.0, USA) used to enter and analyze the data. Chi-square test used to evaluate the relationship between knowledge, attitude and practice. Ultimately, the analyzed data organized and present in appropriate tables, charts and narrative formats.

Results

In this study, 100 patients contributed with a response rate of 100%. The majority (76%)of the them were female. More than third of respondents were between 31-45 years old(30%). Less than quarter of them have high degree of education (15%). Only 5% was working in medical field .The majority of respondents did not know the antibiotic resistance. 2% of them consider the cost is the major reasons of OTC antibiotics. Three quarter of them reported that antibiotics may treat viral infections 75%. More than one third of them can take more than one antibiotics if they have sever influenza symptoms(35%). More than two third of respondents disagree with antibiotics resistance is the major obstacle(71%). 80% of them didn't know that antibiotics resistance is the big healthy problem in these days.

Conclusion and recommendation

The results of the study showed a lack of awareness, negative attitudes, and misbehavior regarding antibiotic use and resistance. Which accelerated the development of antimicrobial resistance. Therefore, awareness programs should be planned to spread knowledge in society. Also, appropriate use of antimicrobials efforts should be made to phase out the use of over-the-counter antimicrobials.

KEYWORDS: antibiotic use, antibiotic resistance, attitude, knowledge, patients, practice.

Questionnaire

Part One: sociodemographic characteristics

According sociodemgrafic characteristics, the response rate was 100 %. The majority of respondents was female 76%. More than halve of them has post graduate. Further results are shown in bellow.

1- sex:
Male/female 24/76
2-Age:

18–30	20
31–45	30
46–55	20
56–65	15
>65	15

3- status

Single	35
Married	60
Divorce	5

4-education

High school	40
Post graduated	35
High degree	15
Non	10

5- professional

Medical field	5
Engineer	5
Farmer	45
House wife	30
Others	15

Part Two: Respondents toward antibiotics

6- Do you take antibiotics yes/no 80/10

7-source of information

Hospital 10
Social media 30
Pharmacy 25
Relatives 35

8-frequenc of taking these drug
Once daily 15
More than one 45
9-do you know what antibiotics resistance?
Yes/no 10 /80

10- reason of OTC antibiotics:
Lack of time 2
Least cost 2
Your experience 2

11-the fact of antibiotics resistance
difficult treat 5
Easily treated 6
I don't know 89

Part Three: knowledge toward antimicrobial
According to knowledge toward antimicrobial use,the majority of them reported the antimicrobial is effective antimicrobial treatment. The minority of them reported that self treatment cause resistance 20%. Only 5% reported that antimicrobial have side effects. Further results are shown in bellow 3.1.

3.1: knowledge toward antimicrobial

statement	YES	NO
12- Antimicrobial is effective antimicrobial treatment	80	20
13-non rational use of drugs may lead to appear of resistance	20	80
14-self treatment cause antimicrobial resistance	20	80
15- Antimicrobial may effective viral infections	75	25
16-antimicrobial have side effects	5	95

Part four: attitude toward antimicrobial
According to attitude toward antimicrobial. The majority of respondents agree with that that antimicrobial work as effective treatment for viral. 85%. More than half of them agree with that you can take more two antimicrobial if you have severed viral 55%. The minority of them reported that doctor must only prescribe antmicrobial. Further results are shown in bellow 4.1.

4.1: attitude toward antibiotics

statement	agree	I don't know	disagree
17- Antimicrobial work as good treatment for influenza disease	85	5	10
18- I take Antimicrobial without medical advising	75	5	20
19-you can take more than Antimicrobial if you have sever viral	55	20	25
20-i don't prefer OTC antibiotics	10	10	80
21-most treatbale Antimicrobial have expensive	80	5	15
22- Antimicrobial resistance is the high obstacle	24	5	71
23- Antimicrobial resistance is the huge healthy problem now	20	5	75
24-doctor must only prescribe Antimicrobial	10	10	80

Part Five: practices toward Antimicrobial
According to practices toward Antimicrobial, the majority of respondents reported that they aren't have a good adherence of Antimicrobial s use 66%. More than half of them don't complete Antimicrobial course if they cure 60%.

Further results are shown in bellow 5.1.

5:1 practices toward Antimicrobial

statement	YES	NO
25-i have a good adherence of Antimicrobial prescribe .	66	34
26-in severe case ,I take more thantwo of Antimicrobial	40	60
27-i don't complete antibiotics course if I cure	60	40
28-i complete the course of these drugs	1	99
29-sometimes i check the expiry date of these drugs	1	99
30- I use Antimicrobial only if the hospital prescribe it	15	85

DISCUSSION

Improper use of Antimicrobial can have serious consequences in several ways. Patients' drug knowledge, attitudes and practices have a significant impact on how drugs such as antibiotics are used. Evaluating the overall use of these drugs can provide valuable information that can help design interventions to improve antibiotic use.[13.14]

In this study, all patients received antibiotics for different diseases from different sources. In the present study, all patients reported taking antibiotics at least once in the 12 months prior to the study. This rate is comparable to a study conducted in Namibia (80%). Epidemic in India. Areas are provided, data collection. Noticeable differences with region and period.[16]

The study revealed many misconceptions about antibiotic use and resistance. 47.4% of respondents said fevers caused by viral infections and malaria should not be treated with antibiotics.[17] Research conducted in different countries has produced different results. For example, about 42.2% of respondents in Iraq said that antibiotics do not treat viral infections, 36 29.8% in Kuwait, 9 17.0% in Malaysia, 37 65% in the United States, 38 73.2% in Sweden, 39 and 66.4% of the population. % said they were thinking about antibiotics. It is effective against colds and coughs in Saudi Arabia.[18.19] 40 These differences may be due to social factors, regional laws, and differences in people's practices, knowledge, attitudes, and behaviors. Our study shows a positive relationship between education and values, suggesting that education is one of several determinants of values.[20] The knowledge-behavior model suggests that knowledge is a predictor of behavior and that greater knowledge leads to better behavior and prevention of negative change.

CONCLUSION AND RECOMMENDATION

The results of the study showed a lack of awareness, negative attitudes, and misbehavior regarding antibiotic use and resistance. Which will accelerate the development of antimicrobial resistance. Therefore, awareness programs should be planned to spread knowledge in society. Also, appropriate use of antimicrobials efforts should be made to phase out the use of over-the-counter antimicrobials.

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