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EVALUATION OF ANTIBIOTIC PRESCRIPTIONS BY USING THE SCIENTIFIC NAME OR BRAND IN BAGHDAD

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ABSTRACT

Introduction: Unless it is a new medicine, most prescription and over the counter medicines are sold by brand name and generic name medicines. **Aim:** to evaluate the prescriptions which is used the scientific name of antibiotic as well as the drug with the brand name. **Method:** A cross sectional study was conducted at Al-Yermook teaching hospital among those who attending the outpatient clinic with different diseases for a period two months. the convenience sample was used to collect our sample. The data collection through a questionnaire was designed for this study. the information included the age, gender, # of item, antibiotic use, antibiotics by scientific name & diagnosis. The data entered to Excel sheet and the STATA software program was used to analysis this data. **Result:** Out of 923 cases, 258 (27.9%) in the age <10 years, 57.7% were female, 66.1% of medical prescription includes more than 3 items, 51% had antibiotic use, 11.5% use the antibiotic by injection. The higher percentage of antibiotic which is used for eye infection 29.4%, followed by gastroenteritis in 14.4%. **Conclusion**: - There is a statistically significant have been found between antibiotic use by scientific name, age groups and diagnosis at the p. value <0.05.

INTRODUCTION

Unless it is a new medicine, most prescription and over the counter medicines are sold by brand name and generic name medicines.[1] The active drug ingredients are the same between the brand name and the generic name medicine.[2] The generic may look or taste different than the brand name medicine, but the generic name medicine must work the same way and just as quickly as the brand name medicine.[2]

The generic and brand name medicines also share the same dose strength and way it is to be given. Use, or the reason you take the medicine and the side effects. In addition, the safety generics often cost much less than brand name medicines.[3] Generic names are usually more complicated and harder to remember than brand names. Many generic names are a shorthand version of the drug's chemical name, structure, or formula. In contrast, brand names are usually catchy, often related to the drug's intended use, and relatively easy to remember, so that doctors will prescribe the drug and consumers will look for it by name.[4] Brand names often suggest a characteristic of the drug.[5] For example, Lopressor lowers blood pressure, Glucotrol controls high blood sugar (glucose) levels, and Skelaxin relaxes skeletal muscles. Sometimes, the brand name is simply a shortened version of the drug's generic name—for example, Minocin for minocycline.[6] This study aimed to evaluate the prescriptions which is used the scientific name of antibiotic as well as the drug with the brand name.

METHODOLOGY

A cross sectional study was conducted at Al-Yermook teaching hospital among those who attending the outpatient clinic with different diseases for a period two months. the convenience sample was used to collect our sample. The data collection through a questionnaire was designed for this study. The information included the age, gender, # of item, antibiotic use, antibiotics by scientific name & diagnosis. The data entered to Excel sheet and the STATA software program was used to analysis this data.

RESULTS

Out of 923 cases, 258 (27.9%) in the age <10 years, 57.7% were female, 66.1% of medical prescription includes more than 3 items, 51% had antibiotic use, 11.5% use the antibiotic by injection [Table1].

The higher percentage of antibiotic which is used for eye infection 29.4%, followed by gastroenteritis in 14.4% [Table2]. There is a statistically significant have been found between antibiotic use by scientific name, age groups and diagnosis at the p. value <0.05[Table 3, Table 4 and Table 5].

Table 1: Distribution of cases by variables.

Variables	Frequency (923)	Percent
Age years		
0-10	258	27.9%
11-20	188	20.4%
21-30	189	20.5%
31-40	99	10.7%
>40	189	20.5%
Gender		
Male	390	42.3%
Female	533	57.7%
No. of items		
0	1	0.1%
1	135	14.6%
2	177	19.2%
≥3	610	66.1%
Using of antibiotics by scientific name		
Yes	470	51%
No	453	49%
Total	923	100%
Injection use		
Yes	183	19.8%
No	740	88.2%
Antibiotics injection		
Yes	106	11.5%
No	817	88.5%

Table 2: Frequency and percentage distribution of studied sample according to diagnosis of diseases

Diagnosis	Frequency	Percent
Otitis media	56	6.1%
Renal disease	81	8.8%
Teeth infection	56	6.1%
Skin infection	59	6.4%
Diabetes mellitus	48	5.2%
Cardiovascular disease	24	2.6%
Gastroenteritis	133	14.4%
Eye infection	271	29.4%
Bronchitis	4	0.4%
Blood infection	4	0.4%
Gynecological diseases	14	1.5%
Fractures and wounds	53	5.7%
Others	120	13%
Total	923	100%

Table 3: Distribution of studied sample by antibiotics use and scientific name.

Variables	Scientific Name		Total	p. value
Antibiotics use	Yes No. %	No No %		
Yes	391 83.2%	79 16.8%	470 100%	0.000
No	-	453 100%	453 100%	

Table 4: Frequency and percentage distribution of studied sample according to age groups by antibiotics use.

Variables	Antibiotics use		Total	p. value
Age groups	Yes No. %	No No. %		
0-10	139 53.9%	119 46.1%	258 100%	0.000
11-20	103 54.8%	85 45.2%	188 100%	
21-30	87 46%	102 54%	189 100%	
31-40	74 74.7%	25 25.3%	99 100%	
>40	67 35.5%	122 64.5%	189 100%	

Table 5: Distribution of studied sample according to diagnosis of diseases by antibiotics use.

Variables	Antibiotics use		Total	p. value
Diagnosis	Yes No. %	**No No. %**		
Otitis media	23 41.1%	33 58.9%	56 100%	
Renal disease	59 72.8%	22 27.2%	81 100%	
Teeth infection	42 75%	14 25%	56 100%	
Skin infection	33 56%	26 44%	59 100%	
Diabetes mellitus	11 23%	37 77%	48 100%	
Cardiovascular disease	3 12.5%	21 87.5%	24 100%	
Gastroenteritis	84 63.2%	49 36.8%	133 100%	**0.000**
Eye infection	169 62.4%	102 37.6%	271 100%	
Bronchitis	1 25%	3 75%	4 100%	
Blood infection	1 25%	3 75%	4 100%	
Gynecological diseases	7 50%	7 50%	14 100%	
Fractures and wounds	20 37.7%	33 62.3%	53 100%	
Others	17 14.2%	103 85.8%	120 100%	

DISCUSSION

n this study, we found that 27.9% of participant in the age <10 years, compared with a study in US.[6] this difference refers to different culture and tradition between countries. Most developed countries do not use antibiotic drugs for children under the age of five.

Also, 57.7% were female, compared with a study in US[7], This is because women are more susceptible to disease due to contact with pathogens at home or work and neglect in caring for themselves.

66.1% of medical prescription includes more than 3 items, this is due to the lack of awareness and culture in our country where the doctor must write more than one items in the prescription to please the patient and this is against the law. Therefore, the outpatients were more than those who is recumbent in the hospital.[8] Because most patients prefer to take treatment and not to stay in hospital. So, 51% of doctors write the antibiotic with scientific name, compared with a study in Bangladesh[9], this difference due to most doctors prefer to write a brand name so as to make it easier to remember than to use a scientific name. In our study, found 11.5% of doctors prescribed the antibiotic as injection. Compared with a study in Africa.[10] this depends on the diagnosis of the condition if you need treatment by tablet or injection, as well as the opinion of the physician. The higher percentage of antibiotic which is used for eye infection 29.4%, followed by gastroenteritis in 14.4%. Also describe the treatment according to the condition and the speed of its response to the treatment of some cases need longer to heal and the other in a few days.

CONCLUSIONS AND RECOMMENDATION

The number of female cases was more than male cases. About half of the cases were using the antibiotics as a part of treatment. There is a little difference in the use of the scientific name of the drug or brand name. Drug use studies are a necessary tool for assessing prescribing patterns in hospitals, recognizing areas for improvement and improving drug prescribing practices in these facilities.

REFERENCES

1. Grissinger M. Analysis of reported drug interactions: a recipe for harm to patients. Pa Pat Saf Advis, 2016; 13(4): 137-48.
2. ISMP. ISMP safe practice guidelines for adult IV push medications, 2015.
3. ASC Quality Collaboration. Safe injection practices toolkit, 2017.
4. Karpinski, P. H.; Wey, J. S. Precipitation Processes. In Handbook of Industrial Crystallization, 2nd ed.; Myerson, A. S., Ed.; Butterworth-Heinemann: Woburn, 2001; 142-145.
5. US Food and Drug Administration. Information for healthcare professionals: ceftriaxone (marketed as Rocephin and generics), April 21, 2009.
6. Pugliese G, Gosnell C, Bartley JM, Robinson S. Injection practices among clinicians in United States health care settings. Am J Infect Control, 2010; 38(10): 789-98.
7. Steinman, MA, Chren, MM, Landefeld, CS, Vivian, EM. What's in a name? Use of brand versus generic drug names in United States outpatient practice J Gen Intern Med., 2007; 22: 645– 8.
8. Baqui, A.H., et al., Safety and efficacy of alternative antibiotic regimens compared with 7 day injectable procaine benzylpenicillin and gentamicin for outpatient treatment of neonates and young infants with clinical signs of severe infection when referral is not possible: a randomised, open-label, equivalence trial. Lancet Glob Health, 2015; 3(5): e279-87.
9. Bibi, S., et al., Ampicillin and gentamicin are a useful first-line combination for the management of sepsis in under-five children at an urban hospital in Bangladesh. J Health Popul Nutr, 2012; 30(4): 487-90.
10. Ashley, E.A., et al., Antimicrobial susceptibility of bacterial isolates from community acquired infections in Sub-Saharan Africa and Asian low and middle income countries. Trop Med Int Health, 2011; 16(9): 1167-79.