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The Prescribing Pattern of Medications in Ear, Nose and Throat Outpatient Department of a Public Hospital

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Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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ABSTRACT

Aim: This study aimed to describe the prescribing pattern of medications in ear, nose and throat outpatient department of a public hospital in Alkharj.
Methodology: The present retrospective study included collecting data from outpatient pharmacy prescriptions from a public hospital in Alkharj. The data was processed using Microsoft Excel 2016 and the descriptive data was represented as frequencies and percentages.
Results: Most of the prescriptions were written by residents (79.12%). Most of the medications were prescribed as Tablet/Capsule (39.06), Nasal Drop (20.03) and Nasal Spray (16.00%). The most prescribed medication was budesonide (16.16%) followed by xylometasoline (11.62%), paracetamol (11.45%) and amoxicillin/clavulanic Acid (9.60%)
Conclusion: The study revealed that the most common classes of drug prescribed for E.N.T patients were steroids such as budesonide, antibiotics amoxicillin/clavulanic acid and decongestants such as xylometasoline. It is important to increase the awareness of healthcare providers and patients about these drugs. It is also important to monitor medications prescribing to make sure that they are prescribed and used appropriately.

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1. INTRODUCTION

Diseases of the ear, nose and throat (ENT) are common among general population [1]. These diseases affect all age groups, account for most of the medications prescribed and used and could cause impairment of routine life [1-3].

Upper respiratory tract diseases are one of the most common ENT diseases that could lead not only to significant hearing loss but are also could be responsible for learning disability and absenteeism from work and school [4].

Drug use study is an important component of pharmacoepidemiology. World Health Organization defines drug use as 'The marketing, distribution, prescribing and usage of drug in society, with special emphasis on medical, social and economical consequences [5]. Drug use studies are continuing programs that are helpful in giving feedback to the prescribers regarding prescribing, dispensing, administering, and also regarding the rational use of drugs [5, 6].

Various medicines including antimicrobials are used for the treatment of ENT diseases though inappropriate use of the antimicrobials is a major problem as it can lead to drug resistance development [1]. Thus, it becomes necessary to monitor and evaluate different medication use patterns in the course of time and make the required modification in the pattern of prescription so as to decrease its adverse effects and increase its therapeutic benefit [7].

It is essential to evaluate and monitor the drug use patterns from time to time and to make the appropriate modifications in prescribing patterns to optimize the medical services offered to the patients [5,7]. Therefore, this study aimed to describe the prescribing pattern of medications in ear, nose and throat outpatient department of a public hospital in Alkharj.

2. METHODOLOGY

The present retrospective study included collecting data from outpatient pharmacy electronic prescriptions from a public secondary hospital in Alkharj about the prescribing pattern of drugs in Ear, Nose and Throat (E.N.T) department from 1st of July 2018 to 31th December 2018.

The inclusion criteria included all of the outpatients who received prescriptions written by E.N.T department during the study period and the exclusion criteria included the outpatients who didn't treated by E.N.T department and the prescriptions that were written before 1st of July 2018 or after 31th December 2018.

3. RESULTS

The total number of outpatients who received prescriptions from E.N.T Outpatient department was 594. Most of them were males (59.93%) and aged less than 40 years (71.55%). Table 1 shows the personal data of the patients.

Fig. 1. shows the prescribers' level. Most of the prescriptions were written by residents (79.12%) and 12.79% of the prescriptions were written by specialists. Most of the dysfunctions of the ears, nose, or throat are treated by residents but sometime of the diseases can dramatically affect the quality of life and in some cases may lead to more severe diseases.

Table 1. The personal data of the patients

Variable	Category	Number	Percentage
Gender	Male	356	59.93
	Female	238	40.07
Age	Less than 10	136	22.90
	10-19	103	17.34
	20-29	100	16.83
	30-39	86	14.48
	40-49	66	11.11
	50-59	58	9.76
	60-69	21	3.54
	70-79	23	3.87
	More than 79	1	0.17

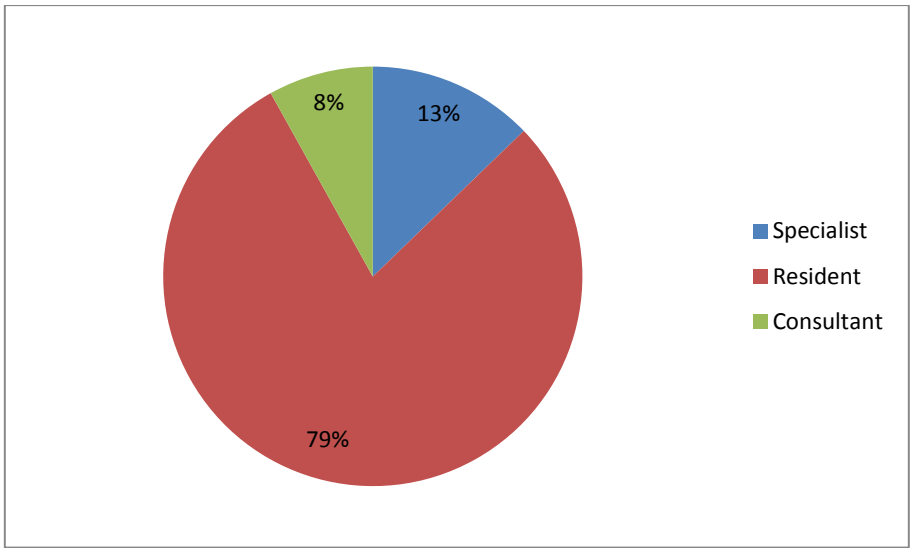

Fig. 1. Prescribers Level

Table 2 shows the dosage forms of the prescribed medications. Most of the medications were prescribed as Tablet/Capsule (39.06), Nasal Drop (20.03) and Nasal Spray (16.00%).

Table 3 shows the most prescribed medications in Ear, Nose and Throat department. The most prescribed medication was budesonide (16.16%) followed by xylometasoline (11.62%), paracetamol (11.45%), amoxicillin/clavulanic Acid (9.60%) and sodium chloride (8.25%).

4. DISCUSSION

The present study showed that steroids, antibiotics and decongestants were prescribed commonly for E.N.T patients. the most commonly prescribed medications were budesonide, xylometasoline, paracetamol and amoxicillin/ clavulanic acid. Kumar et al reported that antibiotics are prescribed more than other drugs and that amoxicillin with clavulanic acid are most commonly prescribed antibiotics in various ENT diseases [2]. Sumalatha et al stated that antimicrobials were the most commonly prescribed drugs in otorhinolaryngology outpatient department (28%), followed by antihistamines (25%), antipyretics (20.5%) [8]. Padwal et al reported that in the ear, nose, throat outpatient department antibiotics were the most frequently prescribed drugs (24.86%) followed by nonsteroidal anti-inflammatory drugs (23.60%), gastroprotective agents (22.55%), and antihistaminics (19.92%) [3]. Ahmed and Menshawy stated that Xylometazoline was prescribed commonly in the E.N.T. outpatients department [9]. Ain et al reported that in ear, nose and throat outpatient and inpatient departments, the most commonly used agent in penicillins was amoxicillin and clavulanic acid (21.74%) [4]. Vanitha et al reported that the most commonly prescribed drugs were antibiotics

Table 2. The dosage forms of the prescribed medications

Dosage forms	Number	Percentage
Tablet/ Capsule	232	39.06
Nasal Drop	119	20.03
Nasal Spray	95	16.00
Suspension/ Syrup	87	14.64
Eye/Ear Drop	27	4.54
Ointment	20	3.37
Mouthwash	9	1.52
Cream	4	0.67
Inhaler	1	0.17

Table 3. The most prescribed medications in Ear, Nose and Throat department

Medication	Number	Percentage
Budesonide	96	16.16
Xylometasoline	69	11.62
Paracetamol	68	11.45
Amoxicillin; Clavulanic Acid	57	9.60
Sodium Chloride	49	8.25
Loratadine	27	4.54
Ciprofloxacin	22	3.70
Fusidic acid	20	3.37
Chlorpheniramine	17	2.86
Amoxicillin	17	2.86
Cinnarizine	11	1.85
Betahistine Dihydrochloride	11	1.85
Ranitidine	10	1.68
Prednisolone	10	1.68
Cetrizine	10	1.68
Chlorhexidine	9	1.52
Cefuroxime	9	1.52
Others	82	13.80

followed by nonsteroidal anti-inflammatory drugs (NSAIDS), proton pump inhibitors and antihistamines and that amoxycillin and clavulanic acid combination was the most commonly prescribed antibiotic (55%) [10]. Daniel et al stated that antibiotics were most frequently prescribed drugs followed by anti-gastric drugs, NSAIDs, anti-allergic, nasal decongestant, anti-secretory agent, antiamoebic agents and that azithromycin are most commonly prescribed antibiotics in various ENT diseases [11]. Joshi et al stated that most common class of drugs prescribed was antimicrobials (24.42%), followed by H1 antihistamine drugs (18.84%), antiulcer drugs (15.55%) and NSAIDS (14.35%) [1]. They also stated that the most common prescribed dosage form was tablets (74.87%) [1]. Bhat et al reported that the most commonly prescribed drugs were antibiotics, antihistamines and non-steroidal anti-inflammatory drugs and that the most common antibiotics prescribed were amoxicillin-clavulanate (53%) [12]. The difference in the prescribing pattern between the present study and other studies could be due to the variation in the prevalence of the ENT conditions.

5. CONCLUSION

The study revealed that the most common classes of drug prescribed for E.N.T patients were steroids such as budesonide, antibiotics amoxicillin/clavulanic acid and decongestants such as xylometasoline. It is important to increase the awareness of healthcare providers and patients about these drugs. It is also important to monitor medications prescribing to make sure that they are prescribed and used appropriately.

CONSENT

As per international standard or university standard, patients' written consent has been collected and preserved by the authors.

ETHICAL APPROVAL

The data was processed using Microsoft Excel and the descriptive data was represented as frequencies and percentages. The data were collected after the approval of the study from hospital ethical committee.

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COMPETING INTERESTS

Author has declared that no competing interests exist.

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