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Medications' Prescribing Pattern in the General Surgery Outpatient Department

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Author's contribution

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

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ABSTRACT

Aim: The aim of this study was to evaluate the drugs' prescribing pattern in general surgery department of a public hospital in Alkharj.
Methodology: The present retrospective study included collecting data from the general surgery outpatient pharmacy prescriptions from a public hospital in Alkharj from 1st of June 2018 to 31th December 2018.
Results: The total number of outpatients who received prescriptions from general surgery outpatient department was 319. Most of them were males (52.35%) and aged less than 50 years (79.31%). Most of the prescriptions were written by residents (47.02). The most prescribed medication was paracetamol (21.32%) followed by amoxicillin/clavulanic acid (12.85%), ciprofloxacin (12.85%), and metronidazole (6.27%).
Conclusion: The study showed that antibiotics and analgesics were the most commonly prescribed drug classes in outpatient surgery department. Continuous monitoring for the prescribing of these drugs is essential to increase the wise use of these medications. More awareness workshops and educational programs for surgeons are needed for the prescribing of these drugs.

Keywords: Medications; outpatient department; prescribing pattern; surgery.

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1. INTRODUCTION

The World Health Organization (WHO) defined a drug as a chemical substance used for the management, cure, diagnosis, or prevention of a disease in human beings for the benefit of recipient [1,2]. Drug utilization has been defined as the marketing, prescription, distribution, and the use of medications in a society with special emphasis on the resulting medical and social consequences [2].

Rational use of drugs requires that patients receive the drugs that are appropriate to their clinical needs, in correct doses that meet their own requirements, for an adequate period of time and at the lowest cost to them and their community [3]. Irrational use of drugs is widespread throughout the world. The main problems include the unnecessary prescription of medications, particularly antimicrobials and injections [3].

Surgical management cannot be completed without the use of antimicrobials and analgesic medications because infection at surgical sites is one of the most common causes of postoperative mortality and morbidity [4]. During surgical management of diseases, irrational prescription may lead to severe complications in pre and postoperative management such that even mortalities may occur [5].

Such irrational usage of medication increases the occurrence of adverse drug reaction, increases hospital days, leads to delay in relief, increases the rate of morbidity and mortality, results in financial loss and is considered one of the main reasons for increasing the rate of resistance to antimicrobials [6,7].

Medication prescription trend can be evaluated retrospectively by the analysis of clinical records of the region or hospital [7]. Such types of drug utilization studies are one of the tools for evaluation of healthcare system that provide information regarding prevalence of irrational medication in a particular region [8]. The aim of this study was to evaluate the prescribing pattern of drugs in general surgery department of a public hospital in Alkharj.

2. METHODOLOGY

The present retrospective study included collecting data from outpatient pharmacy medical records from a public hospital in Alkharj about the prescribing pattern of drugs in general surgery department from 1st of June 2018 to 31th December 2018. Thus, the inclusion criteria included all of the outpatients who received prescriptions written by general surgery department during the study period and the exclusion criteria included the outpatients who didn't received prescriptions written by general surgery department.

The data were collected after the hospital ethical committee approved the study. The data was collected and analyzed using Microsoft Excel 2016 and the descriptive data was represented as frequencies and percentages

3. RESULTS AND DISCUSSION

The total number of outpatients who received prescriptions from general surgery outpatient department was 319. Most of them were males (52.35%) and aged less than 50 years (79.31%). The personal data of the patients is shown in Table 1.

Table 1. The personal data of the patients

Variable	Category	Number	Percentage
Gender	Male	167	52.35
	Female	152	47.65
Age/year	10-19	15	4.70
	20-29	75	23.51
	30-39	95	29.78
	40-49	68	21.32
	50-59	46	14.42
	60-69	8	2.51
	70-79	7	2.19
	More than 79	5	1.57

Table 2 shows the level of prescribers. Most of the prescriptions were written by residents (47.02) followed by consultants (37.30%).

Table 2. The level of prescribers.

Prescribers level	Number	Percentage
Specialist	50	15.67
Resident	150	47.02
Consultant	119	37.30

Table 3 shows the dosage forms of the prescribed medications. Most of the medications were prescribed as tablet (72.41%) followed by gel (6.27%) and capsule (5.96%).

Table 4 shows the most prescribed medications in general surgery outpatient department. The most prescribed medication was paracetamol

(21.32%) followed by amoxicillin/clavulanic acid (12.85%), ciprofloxacin (12.85%) and metronidazole (6.27%).

The most prescribed medication was paracetamol followed by amoxicillin/clavulanic acid, ciprofloxacin and metronidazole. Antibiotics and analgesics were the most commonly prescribed drug classes. Nagla et al. [9] reported that in Orthopedics Outpatient department analgesics (39.6%) were used in most of the cases followed by peptic ulcer prevention drugs (20.2%) and antimicrobials (19.6%) [9]. Several studies also show the high prescribing rates of Analgesics such as paracetamol and diclofenac [10-12].

Salman et al. [3] reported that the groups of drugs most commonly prescribed by general surgeons were antibiotics (93%), analgesics (60%), antacids (43%) and antiemetics (10%) [3]. Furthermore, Sukhlecha et al. [13] stated that antimicrobials were most commonly prescribed, followed by nonsteroidal anti-inflammatory drugs and antiulcer drugs [13]. Khade et al. [5] stated that in the department of surgery, antimicrobial was the most common (38.0%) group of drugs followed by analgesic/antipyretics (50 (19.6%)). Among antimicrobials, ciprofloxacin (22.7%) was the most common drug followed by metronidazole (18.5%) [5].

A high percentage of antibiotics prescribing in surgery is unsuitable. Ahmed et al. [14] stated that most of surgeons prescribed SAP incorrectly and that 38.2% of the surgeons prescribe more than 2 doses per surgical procedure so the patient receives unnecessary antibiotic doses [14]. This could lead to an increase in the adverse events, decrease the efficacy of the treatment, increase the treatment cost and increase in the bacterial resistance to antibiotics.

Table 3. The dosage forms of the prescribed medications

Dosage forms	Number	Percentage
Tablet	231	72.41
Gel	20	6.27
Capsule	19	5.96
Syrup	18	5.64
Cream	16	5.01
Ointment	8	2.51
Suppository	5	1.57
Ampule/Vial	2	0.63

Table 4. The most prescribed medications in general surgery outpatient department.

Medication	Number	Percentage
Paracetamol	68	21.32
Amoxicillin/Clavulanic acid	41	12.85
Ciprofloxacin	41	12.85
Metronidazole	20	6.27
Lidocaine Gel	19	5.96
Lactulose	18	5.64
Antihemorroide	17	5.33
L-Thyroxin	12	3.76
Fusidic Acid	11	3.45
Omeprazole	10	3.13
Amoxicillin	9	2.82
Hyoscine-N-Butylbromide	9	2.82
Ibuprofen	9	2.82
Diclofenac	8	2.51
Lornoxicam	6	1.88
Cefuroxime	6	1.88
Others	15	4.70

4. CONCLUSION

The study showed that antibiotics and analgesics were the most commonly prescribed drug classes in outpatient surgery department. Continuous monitoring for the prescribing of these drugs is essential to increase the wise use of these medications in order to increase the efficacy and decrease the side effects of the drugs. More awareness workshops and educational programs for surgeons are needed for the prescribing of these drugs.

CONSENT

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

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author.

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COMPETING INTERESTS

Author has declared that no competing interests exist.

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