International Journal of Pharmacy and Biological Sciences-IJPBS™ (2019) 9 (3): 421-428
Online ISSN: 2230-7605, Print ISSN: 2321-3272
Research Article | Pharmaceutical Sciences | Open Access | MCI Approved
UGC Approved Journal

Prescription Analysis of Drugs Used in Out-Patient Department in Tertiary Care Hospital, Narsaraopet

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Received: 12 Mar 2019 / Accepted: 16 Apr 2019 / Published online: 1 Jul 2019
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Abstract

To observe the prescribing pattern and evaluate the rationality of drugs used in outpatient department in tertiary care hospital. A prospective observational study was conducted in outpatient department at Tertiary care Hospital in narsaraopet over a period of 3 months. Rationality of drugs usage was evaluated by analyzing the drugs used in outpatient department. Analysis of our study finding that coming to category wise painkillers 30.58%, antacids 16.50%, vitamins 9.70%, antibiotics7.76%, anti-asthmatics6.79%, anti-hypertensive's5.33%, anti-arrhythmatics, anti-diabetics, anti-emetics 2.42%, anti-diarrheal 1.45%, anticoagulants, antithyriods, pregnancy termination 0.48%. and while coming to formulation Tablets 72.8%, syrups7.28%, capsules and caps 4.36%, injections, resupules, sachets2.42%, were most commonly prescribed drugs their formulations and their categories. Here we observed that usage of painkillers percentage is high in all departments and also oral route of drug groups are high. this survey reveals that usage of pain killers were very high and usage generic medicines were very low hene we concluded that by following standard guidelines of prescribing patterns we can avoid the irrationality of prescribing of drugs.

Keywords

Prescription, Outpatient, Prospective Study, Rationality, Generic Names.

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1.INTRODUCTION

A prescription is an instruction from a prescriber to a dispenser. The prescriber is not always a doctor but can also be a paramedical worker, such as medical assistant, a midwife or a nurse. The dispenser is not always a pharmacist, but can be a pharmacy technician, an assistant or a nurse. Every country has its own standards for the minimum information required for a prescription, and its own laws and regulations to define which drugs require a prescription and who is entitled to write it. Many countries have separate regulations for opiate prescriptions.[1]

A prescription should include:

- Name, address, telephone number of prescribers
- Date
- Generic name of the drug, strength
- Dosage form, total amount
- Label: instructions, warnings
- Name, address, age of patient
- Signature or initials of prescriber

The following simple recommendations can help to avoid confusion and make the handwritten prescription more patient- friendly

- A prescription must be neat and legible. This point has become a cliché but that does not diminish its importance. No one is insisting that a prescription be a model of calligraphy, but the link and the handwriting must be clear and decipherable.
- The prescription must be written on a letterhead so that the doctor can be identified and contact if clarifications are necessary.
- The prescription must have a date.
- Patients identification information must be complete. This implies that the full name and the postal address of the patient be noted down along with age and sex.
- Abbreviations are to be used as sparingly as possible. In particular, non- standard abbreviations and latinizations should be avoided. In institutional settings some abbreviations are used ¾ these should be standardized and intimated to all new staff. But drug names should be spelt correctly and should not be abbreviated.
- Brand names, if specified must also be spelt correctly. This is vital since entirely different drugs may have similar sounding brand names.
- It is preferable to write the word 'Units' in full ¾ an 'U' can be read of has 'O' leading to a ten-fold increase in dose!
- A decimal number less than 1should always have a leading e.g. writing 0.5 ml rather 5ml. on the other hand a zero alone should not follow the decimal point e.g. writing 1ml instead of 1.0 ml. missing a decimal point can have catastrophic consequence. The best option would be to avoid unnecessary use of the decimal point e.g. writing 500 mg instead of 0.5 g. [2]
- Prescribing by generic / non-proprietary versus brand/ proprietary names is a matter of perpetual controversy. Generic prescribing has several advantages. However, one may need to use a brand name if prescribing a formulation with multiple active ingredients or if the drug has critical bioavailability so that indiscriminate brand changes are not advisable. Some doctors also use brand names to be sure of the quality of medication being received by the patients. If a brand is specified it becomes imperative for the pharmacist to dispense that brand and not substitute another at will.[7]
- The exact number of the doses or the exact duration of the drug use should be specified rather than leaving the patient and pharmacist guessing as to the quantity that should be dispensed. This, however, does not apply to items to be used as required.[4]
- The dosing frequency and the timing of drugs with meals, if any, should also be specified unambiguously. These matters often cause considerable unnecessary worry to the patients and their relatives.[4]
- Special instructions for the pharmacist, if any, should also be written down explicitly rather than depending up on patients to convey them.
- The prescription must always be signed.
- It should be revised after writing.
- Finally, the prescription must be explained clearly to the patients or their attendants. This is all the more important in India as prescriptions may be illiterate. The doctor must be sure that the use of special formulations, for example dispersible tablets, has been correctly understood by the patient [10]
- Prescription analysis may helpful to patients to increase the medication adherence, patient safety, economic status and decrease the irrational use of drugs.[10]
- Rational use of drugs is based on use of right drug, right dosage at right which is well reflected in the world health organization (WHO) definition: Rational use of drugs requires

that patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements for an adequate period of time, at the lowest cost to them and the community.[2]

- Prescribing patterns need to be evaluated periodically to increase the therapeutic efficacy, decrease adverse effects and provide feed back to prescribers.[12][8]
- The burgeoning cost of drugs prescribed across the country is a major concern. Correct diagnosis, accurate treatment, use of prescribed medicines as directed and timely follow-up are four crucial steps for a favorable outcome of a patient's disease management. In order to ensure that the prescribed medicines are used correctly, it is imperative that the patients get the intended medicines in the first place.[12]
- Medication problem is potentially tragic and costly in both human and economic terms, for patients and professionals alike.[2]
- In the health care setting, there are many problems regarding drugs administration which includes errors in prescription and transcription. The irrational use of drugs by both prescribers and consumer is in fact a global problem which can be assessed by a standardized method of prescription analysis.[6]
- The deleterious impact of poor quality prescriptions, under and over dosing, duplication and multiplicity of drugs on the restricted purse of sick persons, particularly those belonging to lower socioeconomic strata, which also adversely effects their households as a whole in terms of the non-health expenditures, such as food, clothing and education.[6][7]
- Apart from having a negative impact on work flow in practice, prescription errors may pose threat to patient and safety. The problem related to prescribing medication has not been adequately studied, especially in developing countries.[6][7]
- One of the ways of assessing prescribing practices is prescription audit (PA), with which prescribers get regular feedback about their prescriptions.[9]
- Broad-based strategies for improving medication safety
- A fundamental step in improving medication safety is for physicians and other healthcare providers to be familiar with the medications that are available to treat their patients. There are several ways to accomplish this:
- Maintain upto date references of current medications and have those references available at the time the drug is prescribed.
- Understand the patient's condition and diagnosis and indications for the medication considered, including all alternative therapies.
- Consider conditions that may affect the efficacy of the medication, such as dosages, route of administration, patient weight, renal hepatic functioning and other important patient characteristics such as Pregnancy.
- Understand the potential interactions between a newly prescribed medication and other medications already being used by the patient, including non-prescribed medications and supplements as well as therapies being considered (including surgical treatments).[13]
- Recognize the potential risk of high alert medications, those drugs that bare a heightened risk of causing significant patient harm if there is an error in the medication is process.
- Ensure that a patience current medication is continued, if appropriate, when admitting that patient to the hospital and that additional medication used during the hospital stay is compatible with the patient's current therapeutic regimen.[10]
- Emphasize medication reconciliation during periods of care transition, includes admission, discharge and subsequent follow up in the ambulatory setting.
- Provide relevant patient education about the reason the medication is need pay attention to cultural needs to ensure understanding and communicate the reasons for changes to a patient's medication regimen.[16][20]

AIM:

A Study on Prescription analysis of outpatient department in Multispecialty Hospital in Narasaropet.

OBJECTIVES:

The main objectives of the study are

- Obtain information on demographic characteristics of the patients selected for analysis.
- To collect the prescription of various outpatient departments of local hospitals.
- To find out the variability of prescriptions.

- To find out the utilization of medications in outpatients department.

METHODOLOGY:

STUDY SITE: Outpatient department in Multispecialty hospital in Narasaraopet.

STUDY DESIGN: Prospective observational study.

STUDY PERIOD: 3 months

STUDY CRITERIA:

Patients with age group of 17-80 years

All outpatient departments

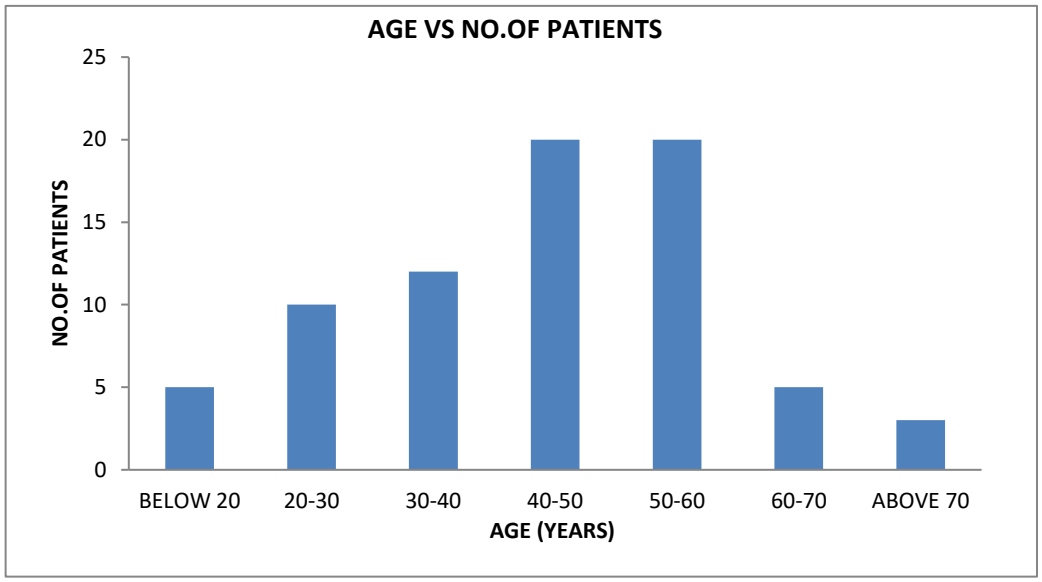
EXCLUSIVE CRITERIA: Inpatients of all departments

Intensive care unit patients

RESULTS

TABLE -1: AGE Vs NO OF PATIENTS

AGE	<20	20-30	30-40	40-50	50-60	60-70	>70	TOTAL
NO. OF PATIENTS	5(6.66%)	10(13.33%)	12(16%)	20(26.66%)	20(26.66%)	5(6.66%)	3(4%)	100



Pie diagram for Age vs No of Patients:

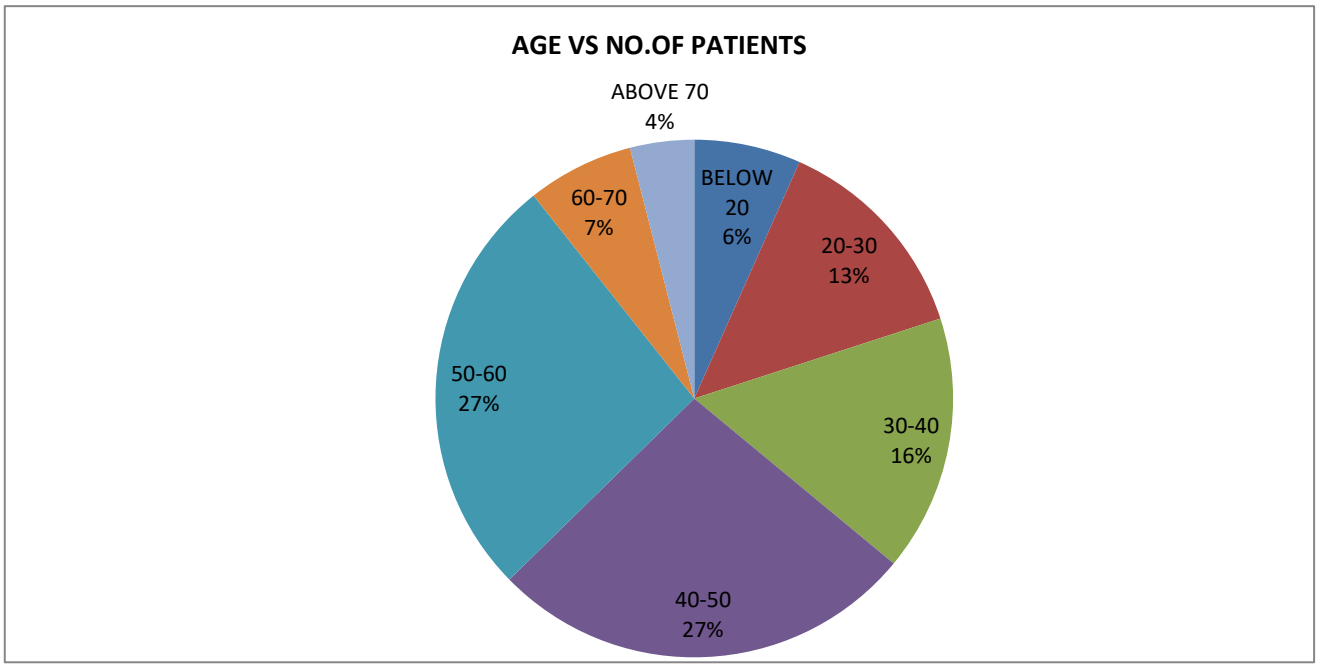


TABLE -2 CATEGORY Vs NO OF DRUGS

Category	Painkillers	Antacids	Antibiotics	Neurolephics	Antihypertensives	Antidiabetics	PREGNANCYTERMINATIOIN
No. Of Drugs	63 (30.58%)	34 (16.50%)	16 (7.76 %)	9 (4.36%)	11 (5.33%)	5 (2.42%)	1 (0.48%)

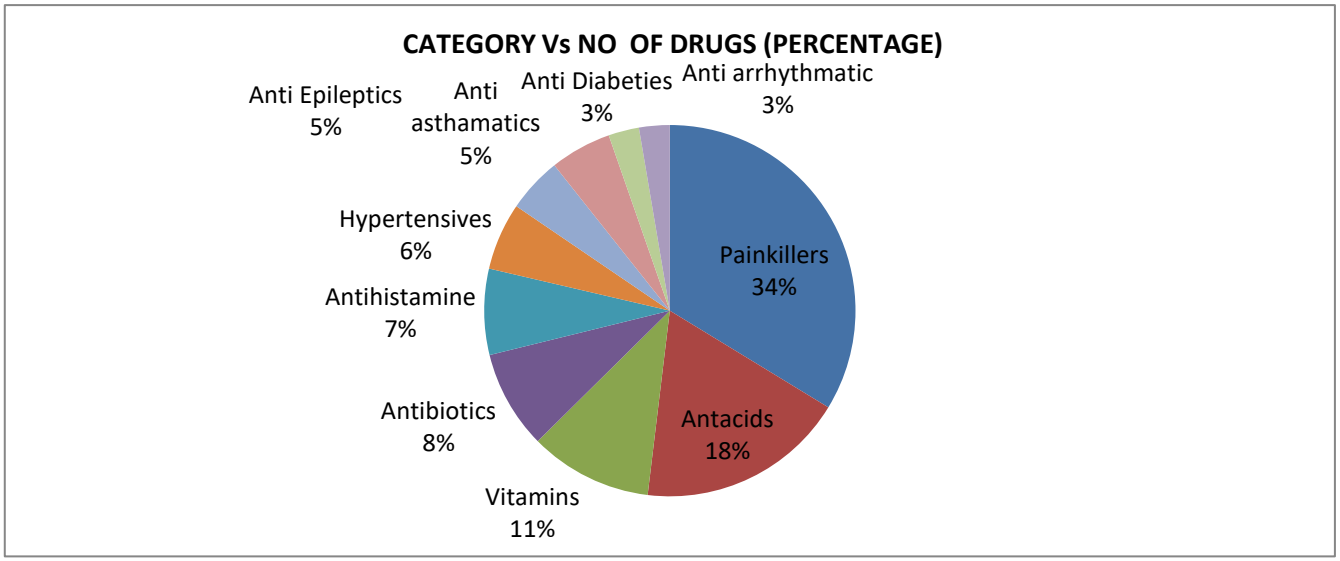
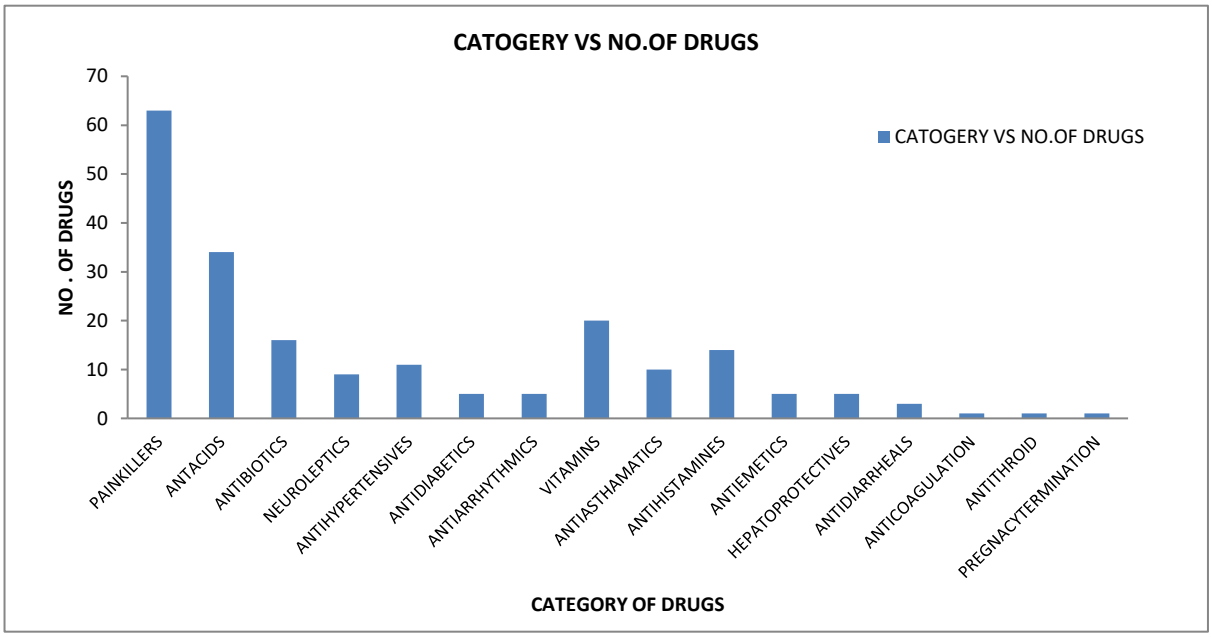
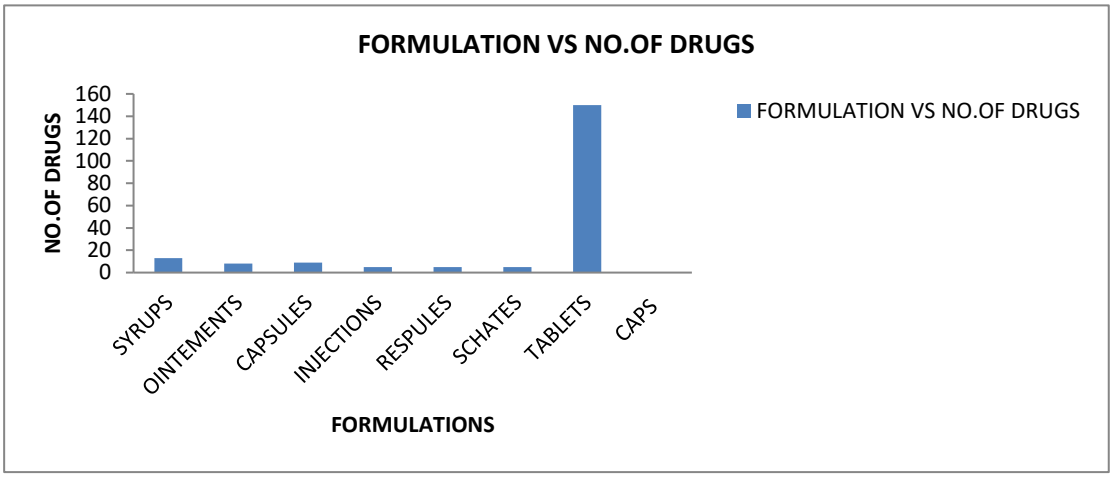


TABLE-3: FORMULATIONS VS NO OF DRUGS

Antiarrhythmatics	Vitamins	Antiasthamatics	ANTIHISTAMINES	ANTIEMCTICS	HEPATOPROTECTIVES	ANTIDIARRHEALS	ANTICOAGULANTS	ANTITHYROID
5 (2.42%)	20 (9.70 %)	10 (4.85%)	14 (6.79%)	5 (2.42%)	5 (2.42%)	3 (1.45%)	1 (0.48	1 (0.48%)



No.of Formulation	Syrups	Ointments	Capsules	Injections	Respules	Sachets	Tablets	Caps	Total
No.of Drugs	13 (7.28%)	8 (3.88%)	9 (4.36%)	5 (2.42%)	5 (2.42%)	5 (2.42%)	150 (72.8%)	9 (4.36%)	206 (100%)



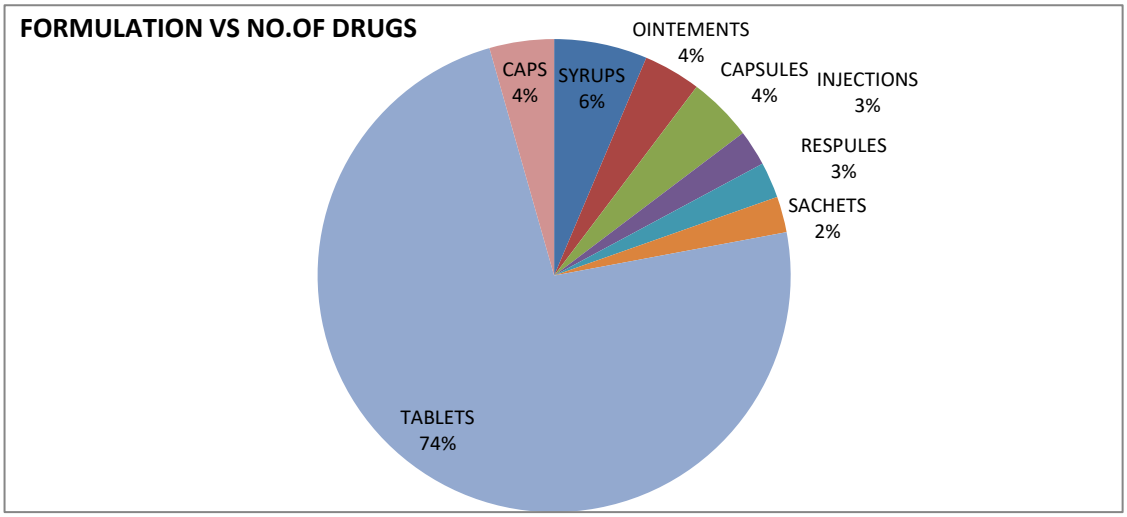
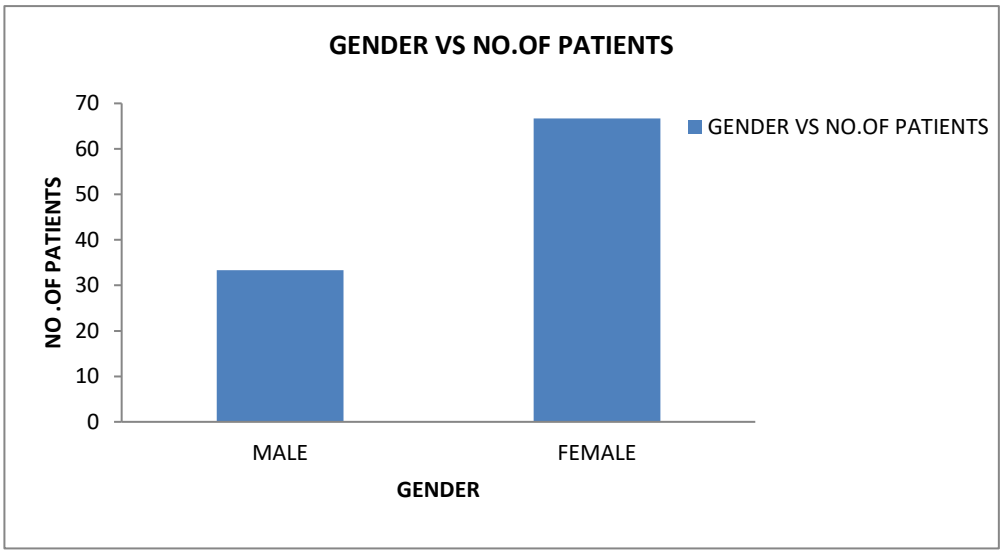
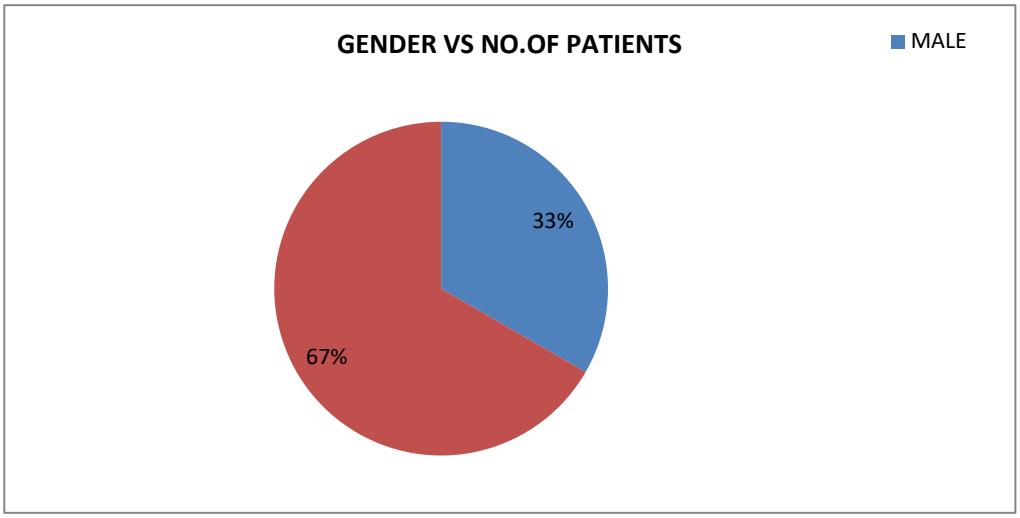


TABLE-4: GENDER Vs NO OF PATIENTS

SEX DISTRIBUTION	MALES	FEMALES
NO. OF PATIENTS	25 (33.33%)	50 (66.66%)





DISCUSSION

- This study was conducted in outpatient departments with an objective to gain an insight into the prescribing practices from patient safety point of view. All the outpatients were included in the study.
- Out of the 75 patients, a higher number of Females population was noted. The patients in age group of 40-60 in both sexes are using more medications that is 26.66%. Next age group of 30-40 in both the sexes are using more no of medications that is 12%. The patients age group of above70 were using less medications in both the sexes that is4%.
- Analysis of our study finding that coming to category wise painkillers 30.58%, antacids 16.50%, vitamins 9.70%, antibiotics7.76%, anti-asthmatics6.79%, anti-hypertensive's5.33%, anti-arrhythmatics, anti-diabetics, anti-emetics 2.42%, anti-diarrheal 1.45%, anticoagulants, antithyriods, pregnancy termination 0.48%. and while coming to formulation Tablets 72.8%, syrups7.28%, capsules and caps 4.36%, injections, resupules, sachets2.42%, were most commonly prescribed drugs their formulations and their catogories. Here we observed that usage of painkillers percentage is high in all departments and also oral route of drug groups are high.

CONCLUSION:

This study concludes that the usage of pain killers was high, and injections are very low. Also, the prescription having generic name of drugs were low. So, framing of standard treatment guidelines for prescribing of drugs were very important and and prescriber education regarding rational use of

medicines as has been done in many hospitals may be helpful for patient healthcare.

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