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SYMPTOMATIC DRUG UTILIZATION PATTERN IN OTORHINOLARYNGOLOGY DEPARTMENT AT A TERTIARY CARE HOSPITAL: A CROSS SECTIONAL STUDY

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ABSTRACT

Background: Ear, nose and throat (ENT) infections are prevalent clinical issues that affect the general population and are a significant contributor to morbidity and senility. A further impairment of balance is caused by ear problems. Nasal conditions can alter the features of the face and make it difficult to breathe and taste. Airway patency may be at risk and speech may be hampered by diseases of the throat. Acute and chronic suppurative otitis media, upper respiratory tract infections, and other ENT conditions are frequent. Antimicrobials, among other medications, are used to treat ENT conditions; nevertheless, improper antibiotic use is a serious issue because it can result in the emergence of drug resistance. In order to reduce its side effects and maximize its therapeutic value, it becomes necessary to modify prescription patterns over time and to change usage habits accordingly. Therefore, the purpose of this study is to review the medications that the ENT department physician at a Tertiary Care Hospital prescribes. **Objective:** To outline the drug use trends in the Mandya, Karnataka, tertiary care hospital's ENT outpatient department (OPD). **Methodology:** A cross-sectional study was conducted. The research took place for around six months. Patients who visited the ENT OPD and met the inclusion criteria had their pertinent data obtained from their prescriptions. **Results:** The ENT Outpatient Department of the MIMS Teaching Hospital in Mandya conducted this investigation. 240 ENT department visitors who met the inclusion and exclusion criteria were included in the study. The information required from the patient's prescription was entered into an accurate patient profile form. Among the 240 patients, 114 (47.50%) were men and 126 (52.50%) were women. In accordance with this study, females are more likely than males to encounter ENT illnesses. In our research, patients between the age of 18 and 29 represented the majority of patients who visited the ENT department, with 65 (27.08%), followed by patients between the ages of 30 and 39 with 54 (22.5%), 40 to 49 with 47 (19.58%), 50 to 59 with 38 (15.84%), and those over 60 with 36 (15%). When the symptoms were investigated, 83 people reported throat pain, 65 reported ear pain, 58 reported discharge from the ears, 27 reported a cold or nasal obstruction and so on. Acute pharyngitis was the most frequent diagnosis, followed by acute suppurative otitis media (19.1%) and chronic suppurative otitis media (12.6%). Allergic Rhinitis (11.25%), Acute Rhinitis (10.83%), Acute Tonsillitis(6.25%), Otomycosis (3.33%),Otitis externa (2.91%),Acute Pharyngotonsiliitis (2.5%), Acute Rhinosinusitis(2.08%), Chronic Rhinosinusitis(1.66%), while the least common diagnoses were Allergic Rhinosinusitis (0.83%), Chronic Tonsillitis (0.83%), Acute Laryngitis (0.83%). Amoxicillin+Clavulanate was found to be the most frequently prescribed antibiotic (49.24%), followed by Cefixime (32.49%), Cefadroxil (7.11%), Ciprofloxacin (5.08%), Azithromycin (2.52%), Metronidazole, Cefpodoxime, and Mupirocin (1.02%), and Linezolid (0.50%) was found to be the least frequently prescribed antibiotic. **Conclusion:** Our study focuses primarily on the prescription practices and drug usage in the otorhinolaryngology department of our hospital. Specifically, it focused on the percentage of each class of antibiotics that were administered, the antibiotic combinations that were prescribed, and the medications that were prescribed for each type of organ infection. Most medications were prescribed by their generic names and given to patients at no cost by the hospital pharmacy, which is a positive development that should be commended. The WHO Essential medicine list, India 2021, included almost all of the medications supplied in oral formulation. In the study populations, steroid prescriptions were less common. This is a very positive development. Therefore, ongoing educational initiatives like pharmacovigilance sensitization by the medical college's pharmacology department may further encourage sane prescription.

KEYWORDS: Antibiotic**,** ENT, Drug utilization pattern.

INTRODUCTION

Otolaryngology, also called otorhinolaryngology, is a medical speciality concerned with the diagnosis and treatment of ear, nose, and throat. An otolaryngologist is often called an ear, nose, and throat doctor, or an ENT for short.[1] ENT infections are prevalent clinical issues that affect the general population and are a significant contributor to morbidity and senility. Ear problems can also make it difficult to maintain balance. Nasal problems can affect breathing and taste, as well as alter facial features. The patency of the airways may be threatened and speech may be hampered by diseases of the throat. Diseases of ear, nose, and throat effect the functioning of adults as well as children, often significant impairment of the daily life of affected patients.[2]

In 2011, the prevalence of disabling hearing loss was approximately 360 million people it is estimated that around 15% of the world's adult population live with a hearing loss. It is also responsible for 94.6 disability adjusted life years (DALYs) lost worldwide, contributing 6.2% of all disability adjusted life years.[3] ENT infections including non-specific upper respiratory tract infections (URTI), acute bronchitis, sinusitis, and otitis media (middle ear infections) are responsible that's upto 75% antibiotics are used.[4] A viral or bacterial illness of the nose, throat (pharynx), sinuses, and voice box is referred to as an upper respiratory infection (URI) (larynx) the tonsils (tonsillitis), the maxillary sinuses behind the nose (sinusitis), the larynx, and the common cold (rhinopharyngitis) are among the most frequent URIs (laryngitis).

Another symptom of URI is acute otitis media in the ears (upper respiratory infection). The most common symptoms of ear infections include ear discomfort, fullness in the ear, hearing loss, ringing in the ears, discharge, nausea, vomiting, and vertigo. Other ear conditions include chronic suppurative otitis media, a recurrent ear infection that can rupture or perforate the eardrum, and otitis media with effusion and fluid build-up in the middle ear. Clogged noses or nasal discharge, sore throats, ear aches, ear discharge, sensitive swelling behind the ears, allergic rhinitis, otitis media, and mastoiditis are examples of common diseases.

The most prevalent medical conditions are rhinitis and sinusitis. In Western societies an estimated 10% to 25% of the population have allergic rhinitis, with 30 to 60 million persons being affected annually in the United States. Sinusitis and rhinitis can both considerably reduce quality of life and exacerbate co-morbid conditions.[5] ENT infections can be caused by microorganisms such bacteria, fungi, and viruses. Their treatment involves the use of appropriate use in closely linked to antibiotic resistance.[6] The majority of the antibiotics were administered for respiratory and ENT illnesses, such as acute bronchitis and rhino-pharyngitis, that were thought to have a viral etiology. Antimicrobial prescription patterns differ from country to country or even from region to region, which is attributable to various factors such as the infecting organisms and antimicrobial, susceptibility, physician preference and costs.[7] The problem of overuse of antibiotic is a global phenomenon. In India, the prevalence of use of antimicrobial varies 24% to 67%. According to a recent study, acute respiratory infections are the most common reason people seek medical care and the reason antibiotics are prescribed each year. This happens despite the fact that antibiotics offer little to no help in the majority of URTI cases.

Drug utilization research (DUR) was defined by the World Health Organization as studying the marketing, distribution, prescription, and use of medicinal products in a society, with special emphasis on the resulting medical and socio economic consequences.[8] Drug utilization research help to estimate number of patients exposed to specified drugs within a given time period, determine the pattern of drug use. The study of drug utilization helps in identifying the problems associated with drug usage in health care system as well as remarks the current approaches to the national use of drugs.[9] Study of drug utilization pattern is very important to tool to assess patterns of drug used. It's an important to assess health care and economic study. It follows that assessment of prescribing pattern in these important medical care facilities is of obvious relevance to identify problems regarding rational use and to propose intervention.[10]

WHO in collaboration with the International Network for the Rational Use of Drug (INRUD) developed core indicators for assessing drug use. These indicators are widely accepted as a global standard for identification of some common problems associated with prescribing such as polypharmacy, inclination of prescribers for branded products, deviation from essential medicines list. This study utilized above core indicators to describe the drug use patterns in the ENT department of tertiary care teaching hospital.[11]

METHODS

A Cross sectional study was carried out wherein 240 prescription of the patients who satisfied the inclusion criteria were analysed. The study was conducted in OPD of ENT department of MIMS teaching hospital, Mandya in the 6 months period after obtaining approval from the institutional Ethics committee and medication utilization form has been designed based on a WHO format. The patient's details including patient particulars, diagnosis, investigations, drug details, and information regarding the indication for prescribing agents.

Statistical Analysis

Data will be entered in Microsoft excel worksheet and word to generate graphs, tables, and descriptive statistics like percentage, mean, etc. will be used.

RESULTS

This study was conducted in the ENT Outpatient Department of MIMS Teaching Hospital, Mandya. A total of 240 patients who visited the ENT department were enrolled in the study based on inclusion and exclusion criteria. The required details from the patient's prescription were recorded in a suitably designed patient profile form.

5.1 PATIENT DISTRUBUTION BASED ON GENDER

Among the 240 patients, 114 patients were male (47.50%) and 126 were female (52.50%). This study showed that the prevalence of ENT diseases were more in females than in males.

Table 1: Patients distribution based on Gender.

GENDER	NO.OF PATIENTS	PERCENATGE
Male	114	47.50 %
Female	126	52.50 %

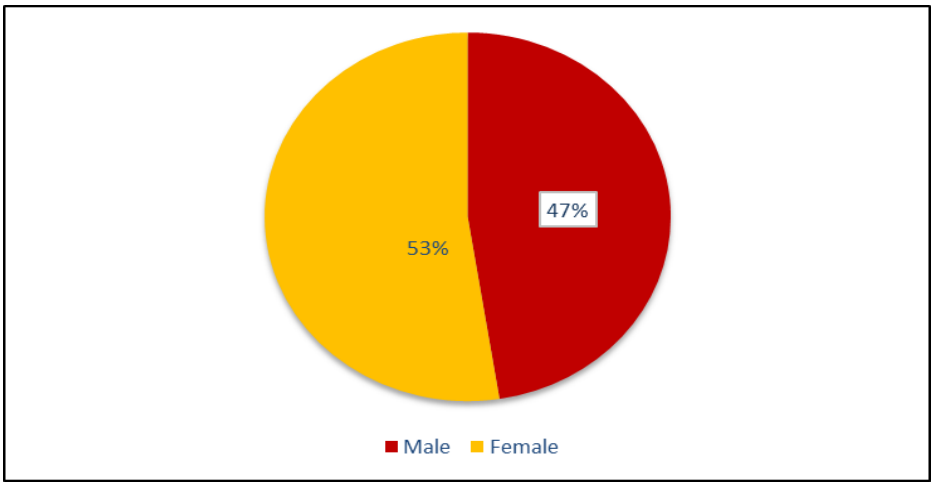

Figure 1: Patients distribution based on Gender.

5.2 DISTRIBUTION OF PATIENT BASED ON AGE

In our study, age group between 18-29 years showed maximum number of patients who visited the ENT department ie 65 (27.08%), followed by 30-39 years 54 (22.5%) patients, 40-49 years 47 (19.58%), 50-59 years 38 (15.84%), ≥60 years 36 (15%).

Table 2: Distribution of patients based on Age.

AGE (YEARS)	NUMBER OF PATIENTS	PERCENTAGE
18-29 years	65	27.08%
30-39 years	54	22.5%
40-49 years	47	19.58%
50-59 years	38	15.84%
≥60 years	36	15%

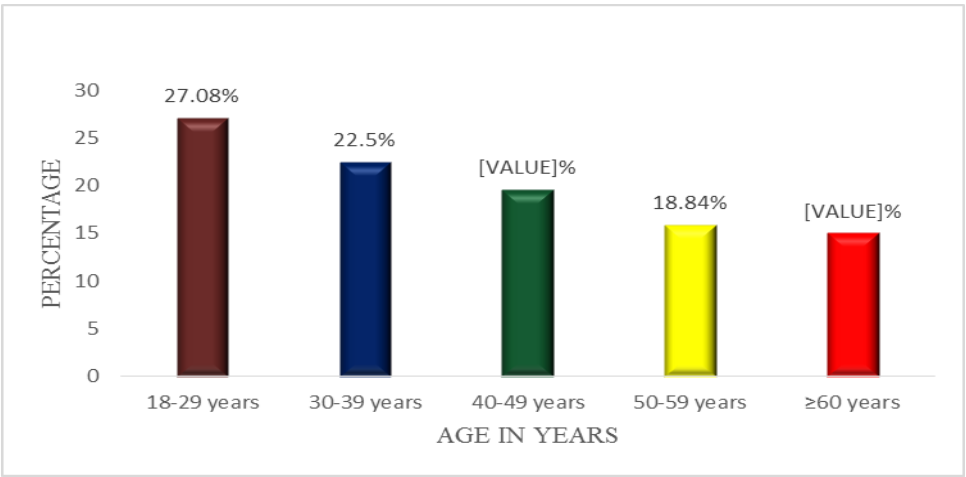

Figure 2: Distribution of patients based on the Age.

5.3 DISTRIBUTION BASED ON SYMPTOMS

When the symptoms were analysed, 83 suffered from throat pain, 65 had ear pain, 58 had discharge from ear, 27 had nasal obstruction/cold, 20 had throat irritation, 18 had excessive sneezing, 11 had cough, 8 had itching sensation/headache, 7 had ear blockage/difficulty swallowing/fever, 6 had swelling, 3 had decreased hearing/foreign body sensation/nose blocking sensation, 2 had chills/sputum/ear bleed/stuffy nose.

Table 3: Distribution based on Symptoms.

SYMPTOMS	NUMBER OF PATIENTS	PERCENTAGE (%)
Throat pain	83	22.50%
Ear ache	65	17.61%
Ear discharge	58	15.71%
Nasal obstruction	27	7.32%
Cold	27	7.32%
Throat irritation	20	5.42%
Excessive sneezing	18	4.88%
Cough	11	2.99%
Itching sensation	08	2.17%
Headache	08	2.17%
Ear blockage	07	1.90%
Difficulty swallowing	07	1.90%
Fever	07	1.90%
Swelling	06	1.62%
Decreased hearing	03	0.81%
Foreign body sensation	03	0.81%
Nose blocking sensation	03	0.81%
Chills	02	0.54%
Sputum	02	0.54%
Ear bleed	02	0.54%
Stuffy nose	02	0.54%

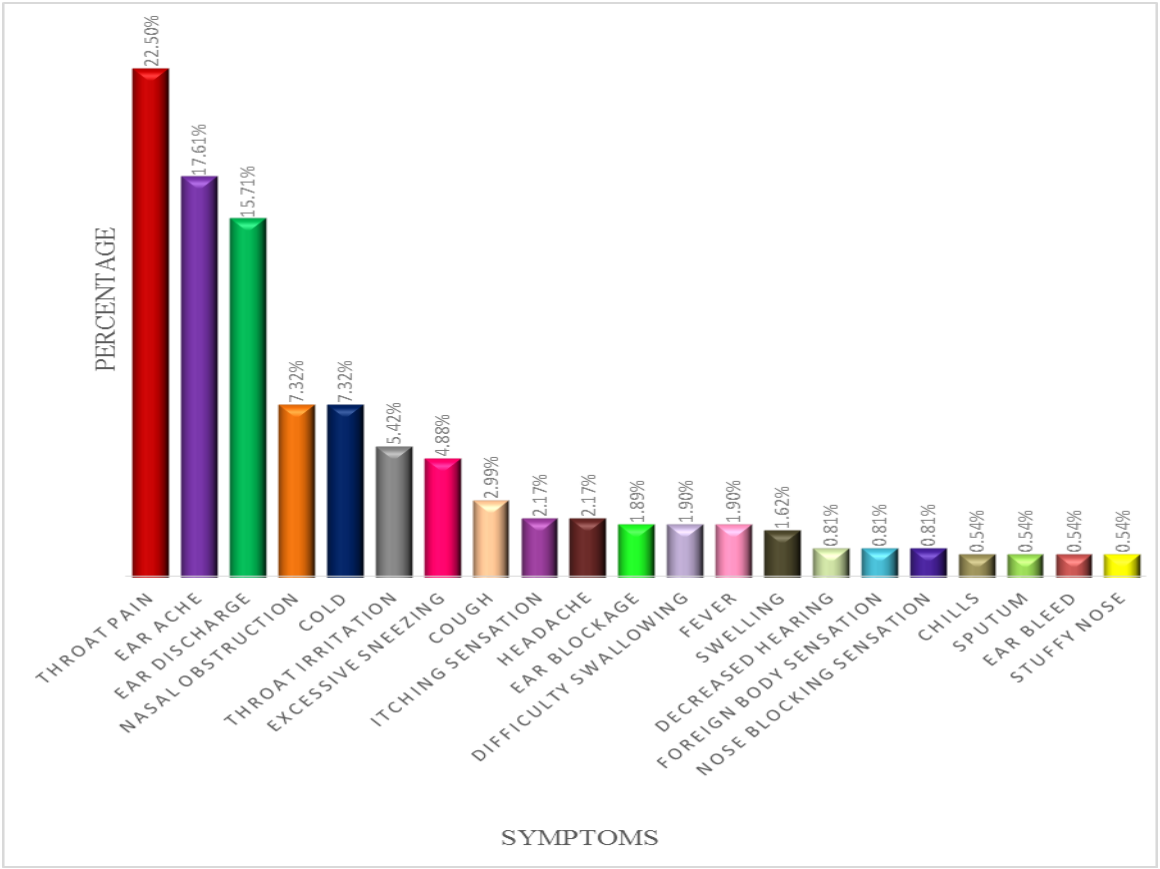

Figure 3: Distribution based on Symptoms.

5.4 THE DIVISION OF CASES BASED ON EAR, NOSE & THROAT

In this study, the highest cases of ENT infections were found to be Ear infection and it's about 91, followed by Throat infection 85, and Nose 64.

EAR : 91
NOSE : 64
THROAT : 85

Table 4: Patient distribution based on ear, nose & throat.

ENT CATEGORY	MALE	FEMALE
EAR	47	44
NOSE	31	33
THROAT	38	47

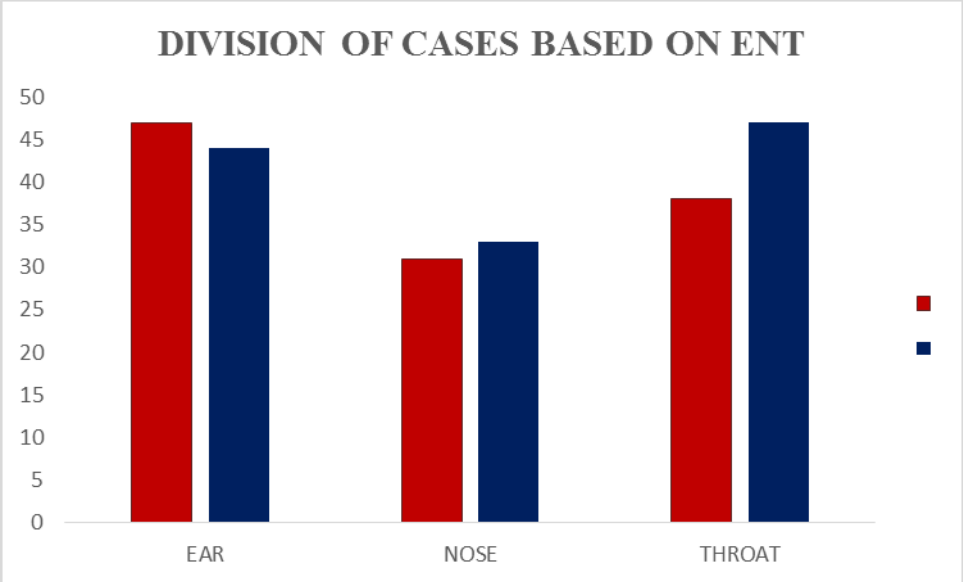

Figure 4: Patient distribution based on ear, nose & throat.

5.5 COMMON ENT DISEASES

The below table shows the proportion of ENT diseases, among the study population. Most common cases reported were Acute pharyngitis (60) followed by Acute suppurative otitis media (46), Chronic suppurative otitis media (30), Allergic Rhinitis (27), Acute rhinitis (26), Acute tonsillitis (15), Otomycosis (8), Otitis Externa (7), Acute Pharyngotonsillitis (6), Acute Rhinosinusitis (5), Chronic Rhinosinusitis (4), Allergic Rhinosinusitis (2), Chronic Tonsillitis (2), Acute Laryngitis (2).

Table 5: Distribution of ENT diseases.

DISEASE	NUMBER OF PATIENTS	PERCENTAGE
EAR		
Chronic suppurative otitis media	30	12.6%
Otitis externa	07	2.91%
Acute suppurative otitis media	46	19.1%
Otomycosis	08	3.33%
NOSE		
Acute Rhinosinusitis	05	2.08%
Chronic Rhinosinusitis	04	1.66%
Allergic Rhinosinusitis	02	0.83%
Acute Rhinitis	26	10.83%
Allergic Rhinitis	27	11.25%
THROAT		
Acute Pharyngitis	60	25%
Acute Tonsillitis	15	6.25%
Chronic Tonsillitis	02	0.83%
Acute Pharyngotonsiliitis	06	2.5%
Acute Laryngitis	02	0.83%

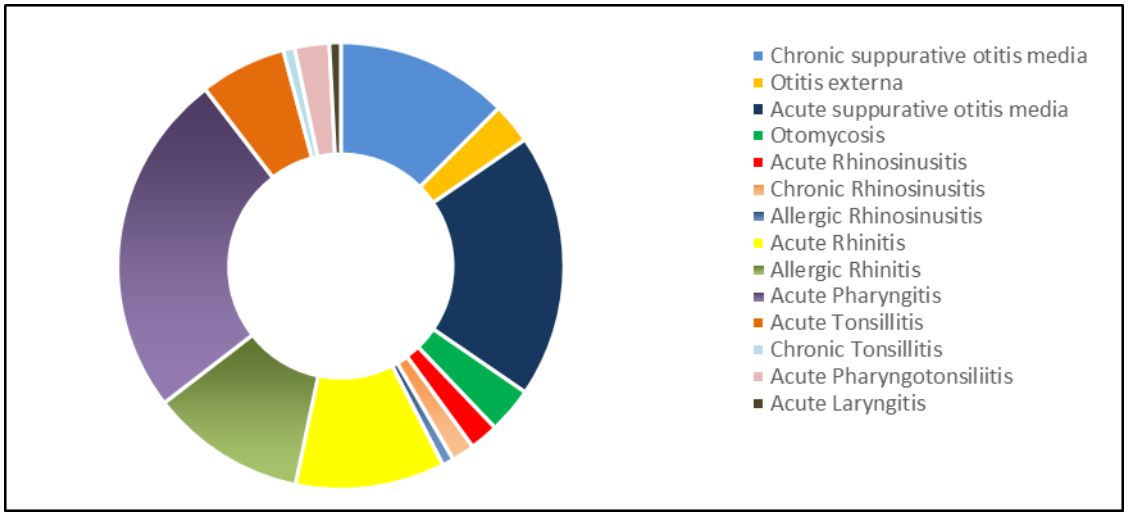

Figure 5: Distribution of ENT diseases.

5.6 CATEGORY WISE NUMBER OF DRUGS PRESCRIBED

The distribution of drugs by category wise shows that the most frequently prescribed class of drug were Antihistamine (224), Antibiotic (197), Analgesic (173), Antifungal (65), Antiseptic (35), Decongestant (31), Antiulcer (25), NSAID (19), and least class of drug was found to be Corticosteroid (10).

Table 6: Category wise numbers of drugs prescribed.

DRUGS		N0 OF DRUGS	TOTAL NO OF DRUGS	PERCENTAGE
Antibiotic	Amoxicillin+Clavulanate	97	197	25.30%
	Cefixime	64		
	Cefadroxil	14		
	Cefpodoxime	02		
	Ciprofloxacin	10		
	Azithromycin	05		
	Linezolid	01		
	Metronidazole	02		
	Mupirocin	02		
Antiulcer	Pantoprazole	05	25	3.21%
	Omeprazole	17		
	Ranitidine	03		
Antihistamine	Cetirizine	174	224	28.75%
	Levocetirizine+Montelukast	37		
	Chlorphenamine	07		
	Bilastine+Montelukast	01		
	Ebastine	05		
Analgesic	Paracetamol	173	173	22.20%
Corticosteroid	Deflazacort	02	10	1.28%
	Fluticasone	06		
	Mometasone	02		
NSAID	Aceclofenac	18	19	2.44%
	Choline Salicylate+Lidocaine	01		
Decongestant	Xylometazoline	31	31	3.99%
Antifungal	Clotrimazole+Neomycin+Beclometasone	51	65	8.34%
	Clotrimazole+Lidocaine	06		
	Ofloxacin+Dexamethasone	08		
Antiseptic	Providone Iodine	35	35	4.49%

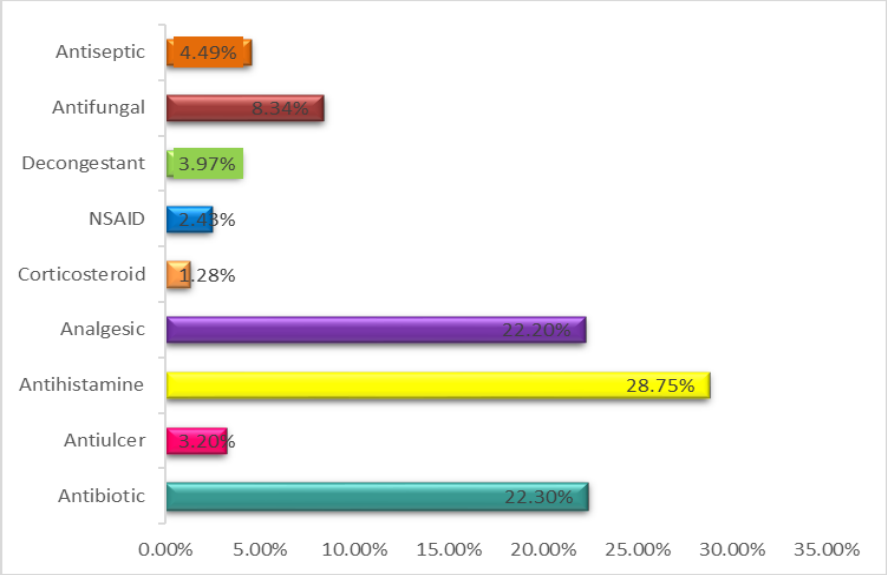

Figure 6: Category wise number of drugs prescribed.

5.7 DIFFERENT ATIBIOTICS PRESCRIBED

The most commonly prescribed antibiotic was found to be Amoxiclav (49.24%), followed by Cefixime (32.49%), Cefadroxil (7.11%), Ciprofloxacin (5.08%), Azithromycin (2.52%), Metronidazole, Cefpodoxime and Mupirocin (1.02%) and the least prescribed antibiotics was found to be Linezolid (0.50%).

Table 7: Antibiotics drugs found among the prescription.

SL.NO	ANTIBIOTIC	NUMBER OF PRESCRIPTION	PERCENTAGE
1	Amoxicillin+Clavulanate	97	49.24%
2	Cefixime	64	32.49%
3	Cefadroxil	14	7.11%
4	Cefpodoxime	02	1.02%
5	Ciprofloxacin	10	5.08%
6	Azithromycin	05	2.52%
7	Linezolid	01	0.50%
8	Metronidazole	02	1.02%
9	Mupirocin	02	1.02%

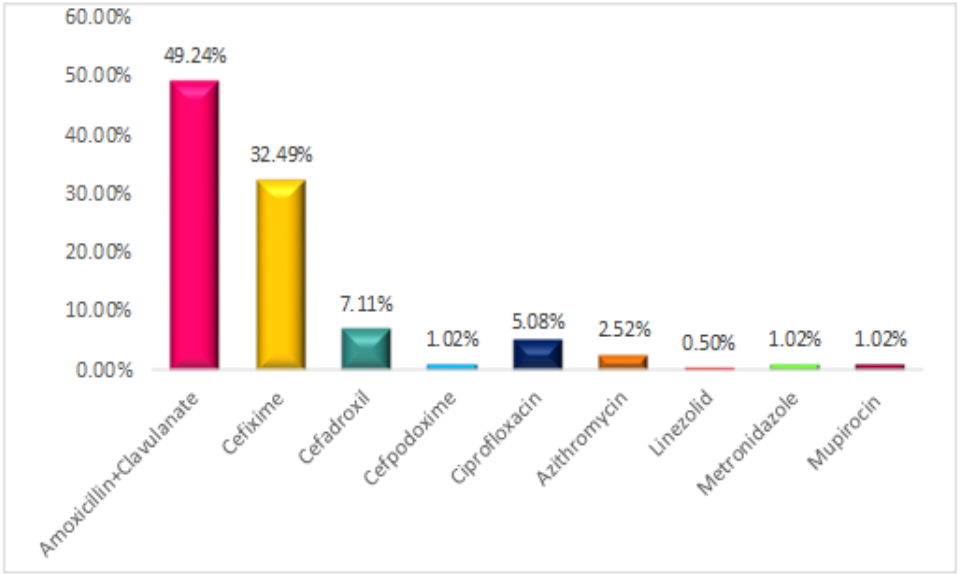

Figure 7: Antibiotics drugs found among the prescription.

5.8 DIFFERENT DOSAGE FORMS PRESCRIBED

A total of 779 drugs were prescribed in 8 different dosage forms. Majority of the drugs in the study population were prescribed as the Tablets (613, 78.70%) followed by Ear drops (65, 8.34%) and others were Gargle (39, 5.02%) Nasal drops & sprays (31, 3.97%), Capsule (17, 2.19%), Syrup (11, 1.41%), Ointment (02, 0.25%), Gel (01, 0.12%).

Table 8: Dosage form of drugs.

SL.NO	DOSAGE FORM	TOTAL NUMBER OF DRUGS	PERCENTAGE
01	Tablet	613	78.70%
02	Capsule	17	2.19%
03	Ointment	02	0.25%
04	Gel	01	0.12%
05	Ear drops	65	8.34%
06	Nasal drops & sprays	31	3.97%
07	Gargle	39`	5.02%
08	Syrup	11	1.41%

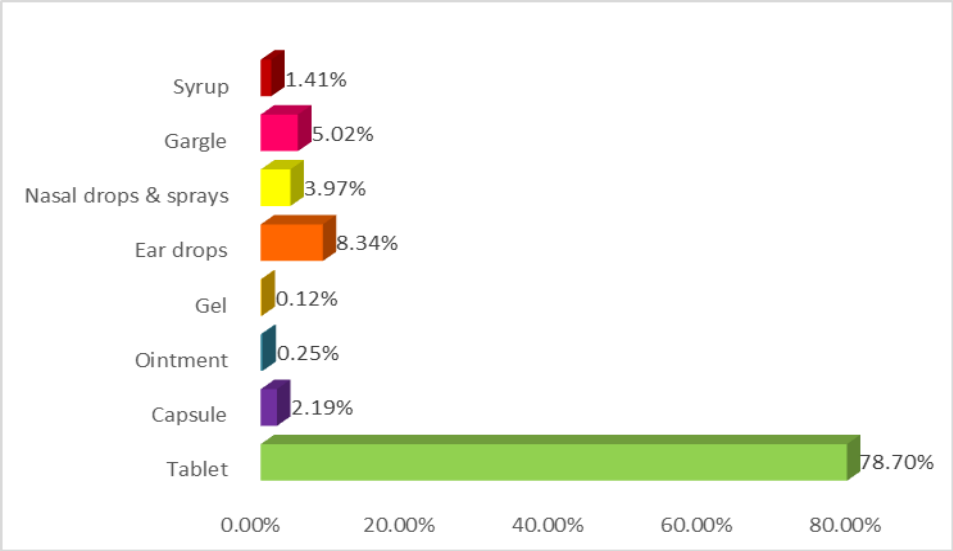

Figure 8: Dosage form of drugs.

5.9 DRUG PRESCRIBING PATTERN OF PATIENTS WITH ENT DISEASES

Drug prescribing pattern of patients with ENT diseases along with their common diseases are studied in the below section.

Table 9: Drug utilization study of Otitis media.

DRUGS		NO.OF DRUGS	TOTAL NO.OF DRUGS	PERCENTAGE
Antibiotic	Amoxicillin +Clavulanate	19	83	31.80%
	Ciprofloxacin	06		
	Cefixime	49		
	Cefadroxil	04		
	Linezolid	01		
	Azithromycin	01		
	Cefpodoxime	01		
	Mupirocin	02		
Antihistamine	Cetirizine	57	57	21.84%
Antifungal	Ofloxacin+Dexamethasone	08	57	21.84%
	Clotrimazole+Neomycin+Beclometasone	49		
Analgesic	Paracetamol	50	50	19.16%
Antiulcer	Omeprazole	06	06	2.30%
NSAID	Aceclofenac	08	08	3.06%

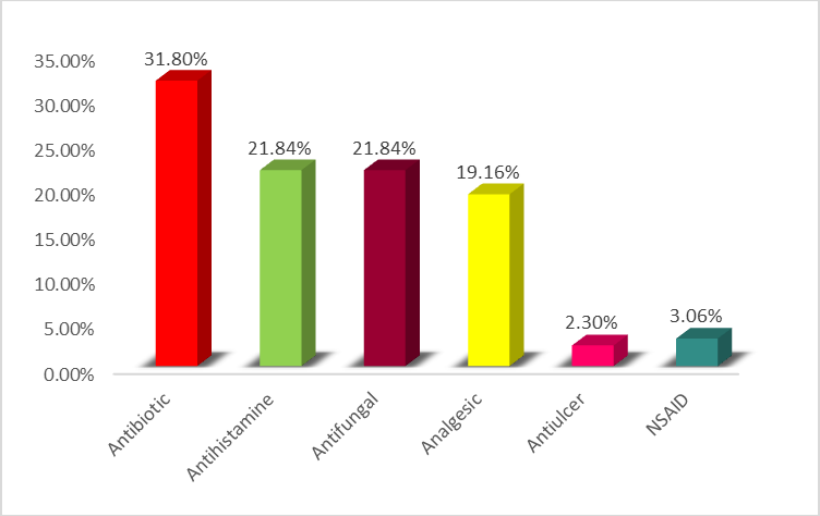

Figure 9: Drug utilization study of Otitis media.

Out of 76 cases of otitis media for which antibiotics (31.80%) were prescribed among which Amoxicillin-clavulanate combination was most commonly given.

Table 10: Drug utilization study of Otomycosis & Otitis externa.

DRUGS		NO.OF DRUGS	TOTAL NO.OF DRUGS	PERCENTAGE
Antibiotic	Cefadroxil	06	12	22.22%
	Ciprofloxacin	03		
	Amoxicillin+Clavulanate	03		
Antihistamine	Cetirizine	12	14	25.93%
	Chorphenamine	02		
Analgesic	Paracetamol	09	09	16.67%
Antifungal	Clotrimazole+Lidocaine	06	14	25.93%
	Clotrimazole+Neomycin+Beclo metasone	08		
NSAID	Aceclofenac	05	05	9.25%

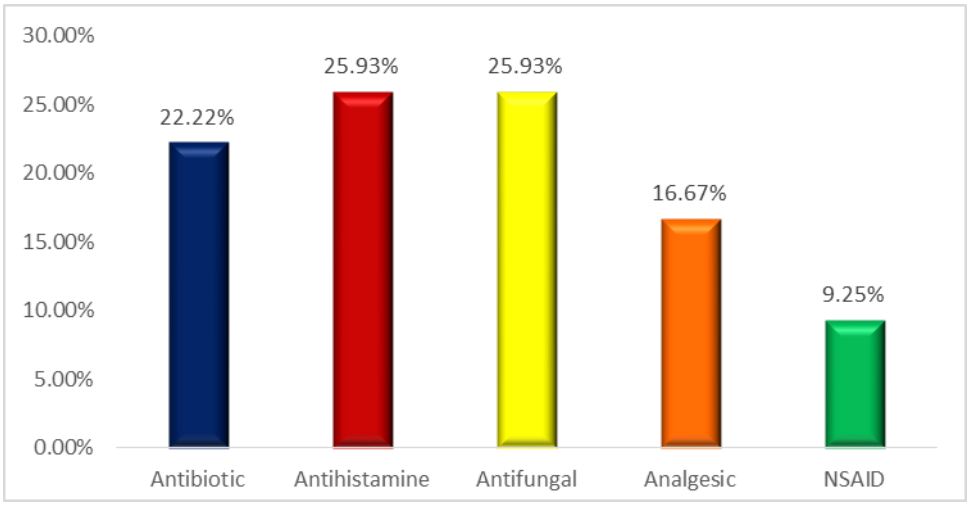

Figure 10: Drug utilization study of Otomycosis & Otitis externa.

Out of 15 cases collected, antihistamine and antifungal (25.93%), were commonly prescribed followed by antibiotic (22.22%).

Table 11: Drug utilization study of Pharyngitis & Tonsillitis.

DRUGS		NO.OF DRUGS	TOTAL NO.OF DRUGS	PERCENTAGE
Antibiotic	Amoxicillin+Clavulanate	64	78	32.24%
	Cefixime	10		
	Azithromycin	01		
	Metronidazole	02		
	Cefpodoxime	01		
Antihistamine	Cetirizine	71	73	30.17%
	Chlorphenamine	02		
Analgesic	Paracetamol	70	70	28.93%
Antiulcer	Omeprazole	10	15	6.20%
	Pantoprazole	04		
	Ranitidine	01		
NSAID	Aceclofenac	03	04	1.63%
	Choline Salicylate+Lidocaine	01		
Corticosteroid	Deflazacort	01	02	0.83%
	Momesatone	01		

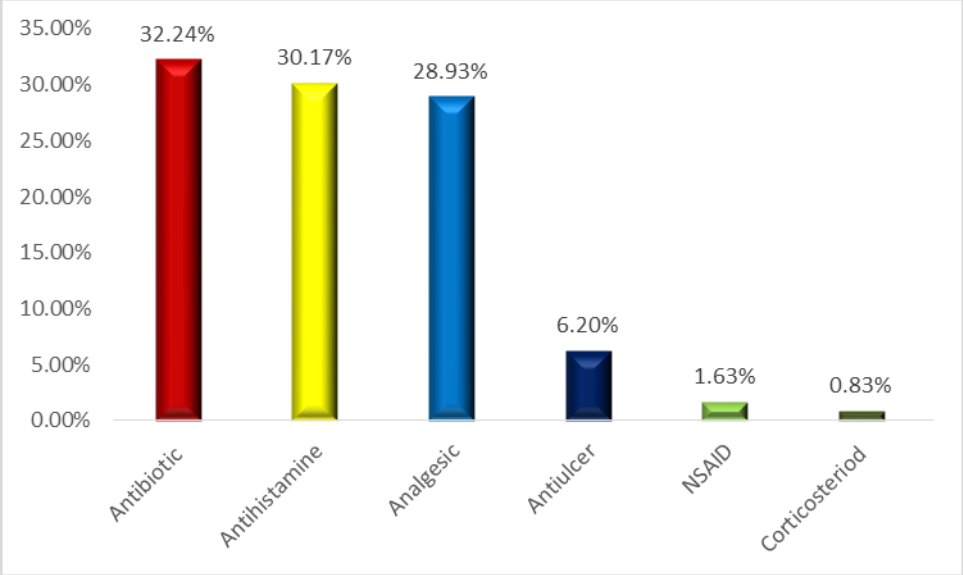

Figure 11: Drug utilization study of Pharyngitis & Tonsillitis.

Out of 75 cases collected, antibiotics (32.24%), were commonly prescribed along with antihistamine (30.17%), analgesic (28.93%), antiulcer (6.20%), NSAID (1.63%), and least prescribed drug was corticosteroid.

Table 12: Drug utilization study of Pharyngotonsillitis & Laryngititis.

DRUGS		NO.OF DRUGS	TOTAL NO.OF DRUGS	PERCENTAGE
Antibiotc	Cefixime	05	08	28.58%
	Amoxicilin+Clavulanate	03		
Decongestant	Xylometazoline	01	01	3.57%
Analgesic	Paracetamol	06	06	21.42%
Antihistamine	Cetirizine	08	09	32.15%
	Levocetirizine+Montelukast	01		
Antiulcer	Pantoprazole	01	01	3.57%
Corticosteroid	Deflazacort	01	01	3.57%
NSAID	Aceclofenac	02	02	7.14%

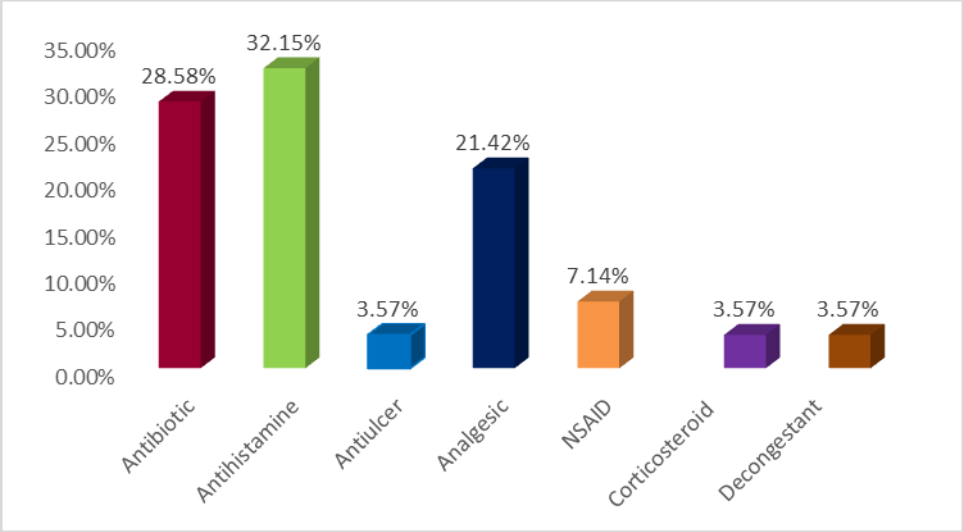

Figure 12: Drug utilization study of Pharyngotonsillitis & Laryngitis.

Out of 8 cases of collected, antihistamine (32.15%) were most commonly prescribed and least prescribed drug was antiulcer, decongestant, corticosteroid (3.57%).

Table 13: Drug utilization study of Rhinosinusitis & Rhinitis.

DRUGS		NO.OF DRUGS	TOTAL NO.OF DRUGS	PERCENTAGE
Antibiotic	Amoxicillin+Clavulanate	09	16	9.81%
	Cefadroxil	04		
	Azithromycin	03		
Antihistamine	Cetirizine	26	71	43.55%
	Levocetirizine+ Montelukast	36		
	Ebastine	05		
	Chlorphenamine	03		
	Bilastine+Montelukast	01		
Analgesic	Paracetamol	38	38	23.31%
Decongestant	Xylometazoline	26	26	15.95%
Antiulcer	Omeprazole	04	06	3.69%
	Ranitidine	02		
Corticosteroid	Fluticasone	06	06	3.69%

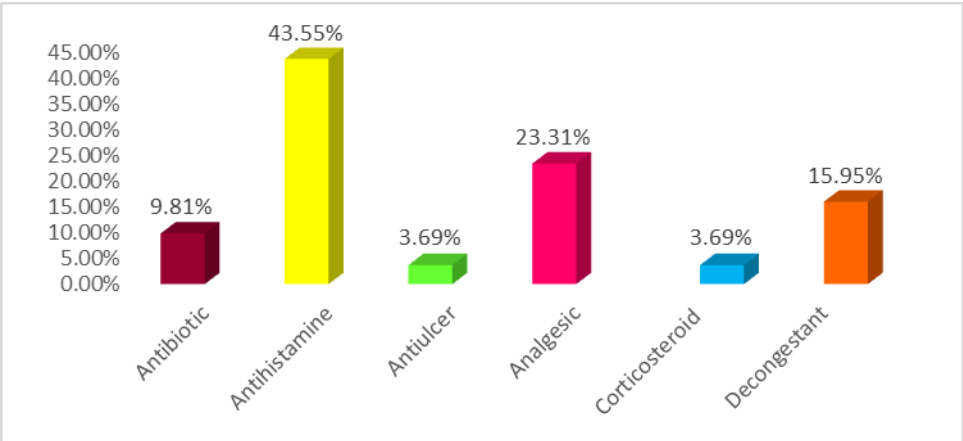

Figure 13: Drug utilization study of Rhinosinusitis & Rhinitis.

Out of 64 cases collected, antihistamine (43.55%) were commonly prescribed among which levocetirizine+ montelukast was commonly given.

5.10 WHO/INURD DRUG USE INDICATORS

Of the 779 drugs prescribed, average number of drugs per prescription was 2.9, it is more than the value given by WHO. Percentage of drugs prescribed by generic name was found to be 52.88%. Percentage of encounter with antibiotics prescribed were 25.28%. Percentage of drugs prescribed from WHO Essential drug list were 79.84%. Percentage of fixed drug combination from WHO essential drug list were 12.45%.

Table 14: WHO/INRUD core indicators.

SL.NO	PARAMETER	WHO SCALE	OBTAINED VALUE
1	Average number of drugs per encounter	1.6-1.8	2.9
2	Percentage of drugs prescribed by generic name	100%	52.88%
3	Percentage of an encounter with antibiotic prescribed	20.0-26.8%	25.28%
4	Percentage of drugs prescribed from WHO essential drug list	100%	79.84%
5	Percentage of fixed drug combination from WHO essential drug list	100%	12.45%

DISCUSSION

The drug utilization study regarding the prescription of medication had been in the outpatient department (OPD) of otorhinolaryngology which shows wide use of antibiotics. Among 240 patients 126 were female and 114 were males. This study showed that prevalence of ENT diseases were more in females than in males which is contradictory to the study carried out by **Vijay R et al.**[2] Here even though the sample size was not very large, it gave a cross-section of patients and the diseases for which they reported for treatment. The age group most commonly affected was between 18-39 years which is similar to the study carried out by **Mohd Altaf Dar et al.**[5] This age group is likely to be more ambulatory and occupational workers that visit the clinic to receive their medical needs. In contrast to the study carried out by **Patel DA et al** [8] the most common infection was Acute pharyngitis (25%) among the throat infections whereas among the ear infections AOM (19.1%) and CSOM (15.5%) were predominant. In nose infection acute rhinitis (10.83%) and allergic rhinitis (11.25%) were common. Drug consumption percentage was highest among throat infections, followed by ear and nose infections.The most often used antibiotics were Amoxicillin+Clavulanate followed by cefixime which is similar to the study carried out by **Bhat GMN et al**.[4] Azihtromycin was prescribed to patients who were hyper sensitive to penicillin antibiotic. An antibiotic, analgesic, antihistamine along with an antiseptic gargle was given to the patient with acute pharyngitis. Here the antibiotic and antiseptic help fights off the infection, whereas the analgesic and antihistamine relieve the symptoms of pain and rhinitis. The concomitant drugs given were proton pump inhibitors and H2 blockers to prevent the gastro oesophageal reflux and drug induced gastritis. The drugs given were pantoprazole and ranitidine. Anti- pyretics like paracetamol was given to reduce the fever associated with most of the throat infection. It was given for its mild analgesic property. This would also avoid gastritis associated with analgesics. Analgesics were given for severe throat infection associated with pain, acute sinusitis and otitis externa. The most commonly prescribed analgesics were aceclofenac. Nasal decongestants and anti-histamines symptomatically relieved the nasal congestion in case of rhinitis. Mucolytics were given in sinusitis, in combination with anti- histamines, also in case of acute otitis media to avoid the congestion. Maximum number of medications were prescribed by their generic where as in case of ear drops, nasal drops, sprays and gargles brand name was used. Most drugs were dispensed to the patient without any cost as it was a government setup and drugs are dispensed without any cost to the patients. It is important to choose the right medicine(s) for a patient and in an appropriate manner in order to achieve the best results of medicine therapy. In our study it is heartening to note that more than 90 percentage of medicines, recorded route of administration, dose, frequency of administration and duration of treatment. This positive observation would be a sign of good prescribing patterns in the ENT outpatient department.

CONCLUSION

Our investigation mainly focuses on the prescription practises and drug usage in our hospital's department of otorhinolaryngology. It primarily concentrated on the proportion of antibiotics from each class that were prescribed, the antibiotic combinations that were prescribed, and the medicines that were prescribed for each type of organ infection. Prescription of maximum drugs was by their generic name and was dispensed free of cost to the patients from the hospital pharmacy, which is an encouraging sign and needs to be encouraged. Almost all the drugs prescribed as oral formulation were present in the WHO Essential drug list, India 2021. Prescription of steroids was less in the study populations. This is a very encouraging sign. Therefore, regular educational interventions like sensitization on pharmacovigilance by the pharmacology department in the medical college may further promote rational prescription.

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