Research Paper

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# Drug Usage Patterns in Ent Out Patients Department of Teaching Hospital

Medical Science

**KEYWORDS :** Drug utilization, CSOM, ASOM, ENT

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## ABSTRACT

*Objective: The present study evaluated the pattern of drug usage in ENT OPD*

*Method: Questionnaires was specifically designed factoring patients' demographical profile, diagnosis of disease, Drug regimen*

*Result: A total 100 prescriptions of patients were analysed who visited ENT OPD Department. Maximum patients were patients were of the age group between 21 – 30 yr (56%). Incidence male(62%) were higher than female(38%). The total 314 drug were prescribed in 100 prescription of the patients. Among 100 prescription, There were following class of drug prescribed. Antihistaminic were prescribed in 25% of the prescription, Antibiotic prescribed were in 25% of the prescription. Nasal decongestant, Analgesic, Antipyretic, Antiulcer and vitamin were prescribed in 10%, 15%, 5%, 12%, 8% respectively. Most commonly drug prescribed were Levocetrizine (18%) among total drug prescribed, Amoxycillin+clavulinic acid(12%), oxymetazoline(9%), Ibuprofen(10%), Paracetamol(5%), pantaprazole(10%), Multivitamin(8%) respectively prescribed and 28% were other drug prescribed but from same above classification of drug , etc. common Ear infection diagnosed were Chronic Suppurative Otitis media, Acute Suppurative Otitis Media, Otitis Media and wax in 30%, 8%, 10% and 5% of the prescription. In Nasal disease, Allergic Rhinitis (15%) and Running nose (5%) were diagnosed. Pharyingitis(18) and Tonsillitis (9%) were common Throat infection diagnosed. All the prescribed by brand name.*

*Conclusion: The study showed maximum case was diagnosed as ear infection. Chronic suppurative Otitis media was most common diases diagnosed in ENT department. Amoxicillin and Clavulinic acid combination was commonly antibiotic prescribed in this study.*

## INTRODUCTION

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. Studies on the process of drug utilization focus on the factors related to the prescribing, dispensing, administering, and taking of medication, and its associated events, covering the medical and nonmedical determinants of drug utilization, the effects of drug utilization, as well as studies of how drug utilization relates to the effects of drug use, beneficial or adverse. Drug prescribing for outpatients is done by various types of health professionals, and outpatient clinics deliver therapeutic service to large segments of the patients. 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 interventions[1].

There are more number people suffering Ear, Nose and throat infection. These are often common organ which directly entouched with outer environment. In summer or winter session, ear, nose and throat are more often get infected. Ear infection like Chronic suppurative otitis media, Acute suppurative otitis media are more common. Nose infection like Allergic rhinitis and running nose are mostly common and pharyingits / tonsillitis are common infection throat. These are disease become sever when environment changed suddenly. There are other diasese are also which are common for ENT OPD.

The International Network for the Rational Use of Drugs (INRUD) was established in 1989 to promote the rational use of drugs in developing countries. Various indicators were developed by INRUD in collaboration with WHO that provided objective indices to allow for assessment of drug use practices2. Still, there is a need for data on both antibiotic use and determinants of use from all the regions of the world. Therefore, it is imperative to evaluate and monitor the drug utilization patterns from time to time, to enable suitable modifications in prescribing patterns to increase the therapeutic benefit and decrease the adverse effects to optimize the medical services for the patients3.

The objective of the present study was to evaluate the patterns of drug prescribing practices in ENT OPD. The primary aim of this study was to generate up to date information on drug use in the ENT outpatient service of our hospital and indications for use. Nowadays, large no. of people suffering from disease of Ear, nose and throat and there are few study conducted in this department to help clinician to select most suitable drug. Hence this study has been designed to generate data which would encourage good evidence based practice and facilitate appropriateness of drugs. Hence the present study was carried out in the ENT OPD.

## OBJECTIVE

To assess the patterns of drug used in ENT OPD

## MATERIAL AND METHODS

### I. Study site

This drug utilization study was conducted at the MGM Medical College &Hospital, Kamothe Navi Mumbai, India.

### II. Study period

The study was an observational study completed over a period of 9 months, from

September 2013 to April 2014.

**III. Study design**
Prospective-open label observational study

**IV. Sample size: Total 100 patients were recruited for the study**

**V. Patient selection**

- Inclusion criteria: Patient attending ENT OPD and giving consent.
- Exclusion criteria: Patient who were seriously sick (emergency) and Patients of IPD.

VI. The study protocol was approved by Institutional Ethics Committee

**VII. Study material**
A specially designed data entry format was used to enter all patients' details like patient name, age, sex, weight, A prospective observational study was designed and medication utilization form was designed for in-depth interview.

The following drug utilization indicators were assessed:

**Prescribing Indicators:**

a. Average number of drug prescribed per patient
b. Percentage of encounters with an antibiotic prescribed
c. Percentage of encounters with an antipyretic prescribed;
d. Percentage of encounters analgesic prescribed.
e. Percentage of drugs prescribed by generic name
f. Percentage of drug by brand name

**RESULTS**

**Demographic profile**: The present study calculated prescription of 100 patients. The study showed maximum 56% of the patients were from age group 21-30 yr followed by 16% were from 10-20yr. Among total patients maximum patients were male (62%) relatively female were less (38%). (**Fig 1 and 2**).

Among Total 100 patients, Total 314 drug were prescribed. Average drug were 3.14 per prescription. 85% of the prescription showed Polypharmacy practice. Antibiotic prescribed in 32% of the prescription. Amoxicillin+Clavulinic acid combination were most common antibiotic prescribed. All the drug prescribed by brand name**. (Table 1)**

**Table 1 Shows: Prescribing particular of ENT OPD**

| | Diagnosis | |
|---|---|---|
| SN | Name of Particular | Results |
| 1 | Total drug prescribed | 314 |
| 2 | Average Drugs/prescription | 3.14 |
| 3 | Poly-pharmacy practice | 85% |
| 4 | Encounters with antibiotics | 32% |
| 5 | Most commonly prescribed antibiotic | Amoxicillin +clavulinic acid |
| 6 | Encounters with brand names | 100% |

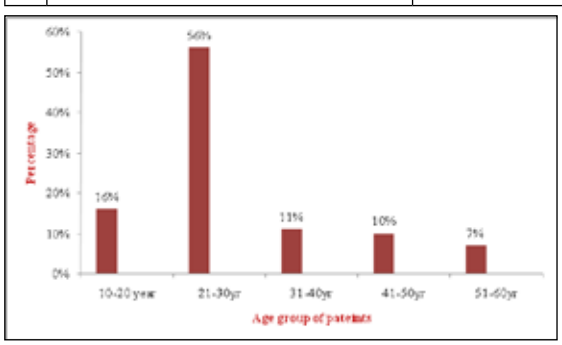


**Fig 1 shows: Age wise distribution of patients**

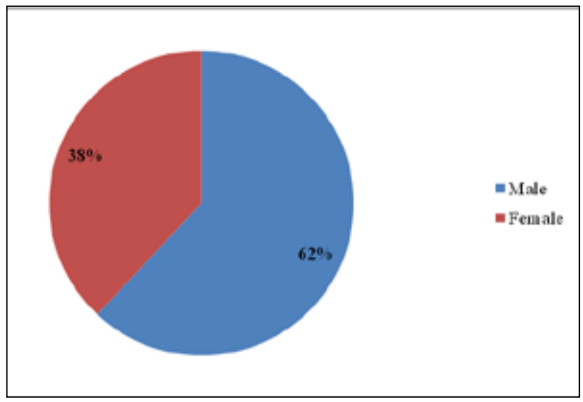


**Fig 2 shows: Sex wise distribution of patients**

**Pattern of drug prescribed:** The total 314 drug were prescribed in 100 prescription of the patients. Among 100 prescription, There were following class of drug prescribed. Antihistaminic were prescribed in 25% of the prescription, Antibiotic prescribed were in 25% of the prescription. Nasal decongestant, Analgesic, Antipyretic, Antiulcer and vitamin were prescribed in 10%, 15%, 5%, 12%, 8% respectively. Most commonly drug prescribed were Levocetrizine (18%) among total drug prescribed, Amoxycillin+clavulinic acid(12%), oxymetazoline(9%), Ibuprofen(10%), Paracetamol(5%), pantaprazole(10%), Multivitamin(8%) respectively prescribed and 28% were other drug prescribed but from same above classification of drug. **(Fig 3 and Table 2)**

**Pattern of diagnosis of disease:** There were different type disease diagnosed in Ear, Nose and Throat. In the present study, common Ear infection diagnosed were Chronic Suppurative Otitis media, Acute Suppurative Otitis Media, Otitis Media and wax in 30%, 8%, 10% and 5% of the prescription. In Nasal disease, Allergic Rhinitis (15%) and Running nose (5%) were diagnosed. Pharyingitis(18) and Tonsillitis (9%) were common Throat infection diagnosed. **(Fig 4)**

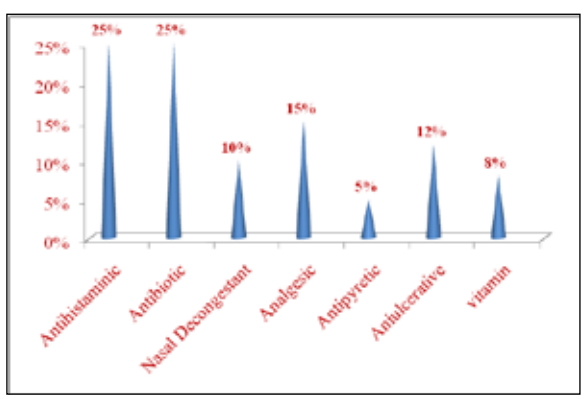


**Fig 3 shows: Patterns of drug used in ENT OPD**

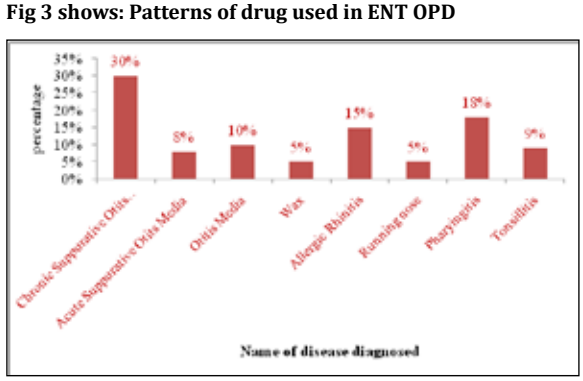


**Fig4 Shows: Patterns of Diagnosis In ENT OPD**

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**Table2 shows: Most common prescribed drug**

| SN | Name of drug | %prescribed |
|---|---|---|
| 1 | Levocetrizine | 18% |
| 2 | Amoxycillin +Clavulinic Acid | 12% |
| 3 | Oxymetazoline | 9% |
| 4 | Ibuprofen | 10% |
| 5 | Paracetamol | 5% |
| 6 | Pantaprazole | 10% |
| 7 | Multivitamin | 8% |
| 8 | Other drug | 28% |

**DISCUSSION**

The Assessment of drug used in Otorhinolaryngology department shows wide use of drugs under various classifications. The present study showed, male patients (62%) were found to be higher than female (38%), as they easily approach the physician. But certain studies show that females are more sensitive to ENT infections than males the reason might be their exposure to kitchen smoke[4.] The age group commonly affected was 21 to 30 years. This would probably be this age group occupational workers who come to the clinic to meet their health care needs.

The present study showed that, The ear infection diagnosed was CSOM (chronic suppurative otitis media), ASOM( Acute suppurative Otits media), Otits Media and wax in ear. Among the Nose infection, allergic rhinitis and Running nose were common. . In the throat infection, bacterial pharyngitis and Tonsilitis were common. This is similar to one such study conducted by Yadav et al1 and S.A Sridevi et al5 ,showing higher incidence of ear infection (50.1) followed by throat (31.37%) and least were nose (26.47%).

In this study, the most common antibiotics were β lactam antibiotics. Amoxicillin + clavulinia acid combination was seems to be the common among them. The study conducted by Farhan Ahmad Khan et al which shows β- lactams (cefixime) was most commonly prescribed antibiotic6.

The prescribing ternds of present study were, the study showed total 314 drug prescribed in 100 prescription of patients. Antihistaminic were prescribed in 25% of the prescription, Antibiotic prescribed were in 25% of the prescription. Nasal decongestant, Analgesic, Antipyretic, Antiulcer and vitamin were prescribed in 10%, 15%, 5%, 12%, 8% respectively. Most commonly drug prescribed were Levocetrizine (18%) among total drug prescribed, Amoxycillin+clavulinic acid(12%), oxymetazoline(9%), Ibuprofen(10%), Paracetamol(5%), pantaprazole(10%), Multivitamin(8%) respectively prescribed and 28% were other drug prescribed but from same above classification of drug which are not similar to study conducted by yadav et al1 and Sridevi et al5 in all aspect but present results conclude almost same results.

The concomitant drugs given were proton pump inhibitors to prevent the gastro oesophageal reflux and drug induced gastritis. 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 ibuprofen. The gastritis induced by analgesics were treated with anti ulcer drugs. Nasal decongestants and anti histamines symptomatically relieved the nasal congestion in case of rhinitis.

Multivitamin capsule were given to patients who were on chronic treatment with antibiotic.

Most of the patients were prescribed antibiotics based on presumptive diagnosis and clinical skills. All the patients were prescribed branded drugs. None of them received the generic drug. Prescription made by generic drug may reduce the overall drug expenditure. The average number of drugs used in each prescription was 3.14. Thus each prescription contains an antibiotic, antiulcer drug, an antihistamine/ analgesics on an average. Hence, physicians should preferably keep the mean number of drugs per prescription as low as possible as higher figures always lead to increased risk of drug interaction, development of bacterial resistance and increased cost.

Our study reveals rational prescribing were done in present study but doctor should aware about drug prescribed by generic name would reduce the cost to patients.

**CONCLUSION**

The study showed maximum case was diagnosed as ear infection. Chronic suppurative Otitis media was most common diases diagnosed in ENT department. Amoxicillin and Clavulinic acid combination was commonly antibiotic prescribed in this study. Polypharmacy prescription trend and prescription by brand name are matter of concern.

## REFERENCE

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