DRUG UTILIZATION PATTERN FOR OCULAR ALLERGIES IN A TERTIARY CARE TEACHING HOSPITAL OF ASSAM

Medicine

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ABSTRACT

Introduction: The importance of conducting drug utilization pattern studies is to study the prescribing trends to promote rational prescribing & develop awareness amongst prescribers. **Aim and Objectives:** To evaluate the current prescribing and drug utilization pattern in the treatment of ocular allergies in a tertiary care teaching hospital of Assam. **Materials and Methods:** A total of 265 prescriptions were assessed. A retrospective study was conducted at the Department of Ophthalmology and Pharmacology, Assam Medical College and Hospital, Dibrugarh, Assam for a period of 2 months from 1/01/2018 to 28/02/2018. Patients of either sex and all ages were included. Patients with concomitant diseases like diabetes, hypertension or other diseases were excluded. **Results:** The commonest ocular allergy was simple allergic conjunctivitis. The male: female ratio was 1.95. Commonest age group affected by the disease is 31-40 years. The average number of drugs per prescription was 1.68. Olopatadine was the most commonly prescribed drug. Topical route was the commonest. The demographic details of the patient such as name, age, sex, address, chief complaints, findings, diagnosis, Rx symbol, doctor's signature were present in all prescriptions. **Conclusion:** No polypharmacy or irrational drug use were noticed.

KEYWORDS

- drug utilization study, ocular allergies, tertiary care hospital of Assam

INTRODUCTION

Drug utilization studies has been described by the World Health Organization (WHO) as the marketing distribution, prescription and use of drugs in a society, with special emphasis on the resulting medical, social and economic consequences.¹

It is an important aspect of pharmacoepidemiology which explains the degree, nature and risk factors of drug exposure with the final objective of rational use of drugs in the community.²

It adds to rational use of drugs by exploring the trends in drug use, producing early signs of irrational drug use and proposes interventions to refine drug usage.³ Prescription pattern studies are studies aimed at analysing the prescribing, dispensing and administration of drugs in a clinical set up to encourage rational prescribing amongst prescribers.⁴ The importance of conducting drug utilization pattern studies is to study the prescribing trends to promote rational prescribing & develop awareness amongst prescribers.⁵

Formerly, only a few studies were carried out to evaluate drug use trends for ocular allergies in ophthalmology in India. Hence, the present study was carried out to evaluate the drug use pattern in ocular allergies in Ophthalmology department in a tertiary care teaching hospital of Assam.²

Ocular allergies are a group of external ocular conditions resulting in inflammatory reaction of the ocular surface from one or more types of hypersensitivity reactions to allergens. It is a widespread issue that affects people of all ages in which the manifestation may vary from being milder asymptomatic cases to critical vision threatening inflammation cases.⁶ Patients affected with ocular allergies manifests with crucial exhausting symptoms like itching, watering of eyes and ropy discharge which impact their routine work, rendering problems in focusing in their work, thereby influencing their quality of life.⁷ The causative agents include pollen dust, household dust, mould, spores, animal exfoliations or chemical medium etc.⁸

The disease spectrum is categorized under the following five subtypes:^{9,10}

- Seasonal Conjunctivitis
- Vernal Conjunctivitis
- Atopic Conjunctivitis
- Giant Papillary Conjunctivitis
- Contact Hypersensitivity

Innumerable case reports suggest that the incidence and prevalence of ocular allergies have grown substantially around the world during the last 40 years and they continue to increase.⁷

It would be informative, to evaluate the trend of anti-allergic drug use in the current system as drug utilization studies related to ocular allergies from India are scanty. With this viewpoint, this study was undertaken to determine the drug utilization pattern for ocular allergies in a tertiary care teaching hospital of Assam.³

The prescription pattern study in patients with ocular allergies patients in Assam, hence has been outlined to provide an ethical feedback to the prescriber.

This study evaluates the prescribing pattern as per the WHO drug indicators, the number of drugs per prescription, the disease statistics as per age and sex, the commonly prescribed drugs and the percentage of different drug groups, the percentage of different drug formulation used, fixed dose combinations, usage of brand names, and drugs prescribed from National List of Essential Medicines 2015¹¹ and Essential Drug List of Assam 2016¹².

AIMS AND OBJECTIVES:

To evaluate the current prescribing and drug utilization pattern in the treatment of ocular allergies in a tertiary care teaching hospital of Assam and to assess the rationality of drug use.

MATERIALS AND METHODS:⁴

Requisite permission for conducting the study was obtained from the institutional authority before performing the study.

Study site: This study was conducted at the Department of Ophthalmology and Department of Pharmacology, Assam Medical College and Hospital, Dibrugarh, Assam.

Study period: A retrospective study was carried out for a period of two months from 1/01/2018 to 28/02/2018.

Study design: Retrospective study.

Sample size: A total of 265 prescriptions were evaluated.

Inclusion criteria: Prescriptions of diagnosed patients of ocular allergies of either sex and all ages were included.

Exclusion criteria: Prescription of patients with concomitant diseases like diabetes, hypertension or other diseases were excluded.

RESULTS AND OBSERVATION:

A total of 265 prescriptions were evaluated for the drugs used for ocular allergies in patients in Ophthalmology department in a tertiary care teaching hospital in Assam.

Total number of drugs prescribed were 445.

The average number of drugs per Drugs per prescription was 1.679.

Out of all different types of ocular allergies, Simple Allergic Conjunctivitis was 147 (55.47%), vernal keratoconjunctivitis was 38 (14.33%), atopic keratoconjunctivitis was 35 (13.20%), giant papillary conjunctivitis was 27 (10.18%) and phlyctenular conjunctivitis was 18 (6.79%).

The male : female ratio was 1.944., Male= 175 (66.03%), Female= (33.96%) cases were seen.

Age-wise statistics(%) of patients was 1-10 yrs was 30 (11.29%), 11-20 yrs was 43 (16.12%), 21-30 yrs was 56 (20.96%), 31-40 yrs was 64 (24.19%), 41-50 yrs was 34 (12.90%), 51-60yrs was 17 (6.45%), 61-70 yrs was 21 (8.06%).

Single drug was prescribed in 81 (18.16%), 2 drugs were prescribed in 357 (80.21%), and 3 drugs were prescribed in 7 (1.57%).

Antihistamine eye drops were most commonly prescribed 188 (42.28%) followed by lubricating eye drops 161 (36.24%) and antimicrobials 69 (15.43%) and steroids 27 (6.04%).

Topical 442 (99.32%), oral 3 (0.67%), injectable zero.

DISCUSSION:

Drug utilization study is a significant facet of pharmacoepidemiology which depicts the degree, nature and risk factors of drug exposure with the final goal of rational drug use in the community.²

In India, an estimated 20% of the general population are affected from some form of ocular allergies presently.⁷

Hence, it would be informative, to evaluate the trend of anti-allergic drug use in the current system as drug utilization studies related to ocular allergies from India are scanty.³

With this viewpoint, this study was undertaken to determine the drug utilization pattern for ocular allergies in a tertiary care teaching hospital of Assam.

So, the Present study analyzed prescriptions of 265 patients of Ophthalmology Out-Patients who were diagnosed with Ocular Allergies. Simple Allergic Conjunctivitis was the most common type of ocular allergy. The most commonly affected age group is 31-40 yrs (24.19 %). The male : female ratio was 1.944 i.e. Male 175 (66.03%) patients was more as compared to Female (33.96%). Total 445 drugs were prescribed and the average number of drugs per prescription was 1.679. Most drugs were given by topical route of drug administration. Olopatadine was the common antihistaminic prescribed. Carboxymethyl Cellulose was prescribed commonly as artificial tear. The Antimicrobial most commonly prescribed was Moxifloxacin. 165 drugs were prescribed from the Essential Drug List of Assam 2016 (EDL Assam 2016) and 222 (49.66%) were prescribed from National List of Essential Medicines 2015 (NLEM 2015) and zero brand names were used in the prescriptions.

Polypharmacy was found in zero prescriptions. The demographic details of the patient such as name, age, sex, address, chief complaints, findings, diagnosis, Rx symbol, doctor's signature were present in all prescriptions.

Antimicrobial therapy was given only to some patients to reduce the incidence of complications in future. Steroids were given for rapid cure. Most patients were treated with only antihistaminics or artificial tears and other supportive agents which encourages good practice and reduce the cost of drug also for the patient.

The assesment for the cost of drug, duration of therapy was not done, as the study displayed quantitative data of drug usage pattern of ocular allergies in patients.

Hence, there is lot of scope to conduct similar studies in the future. The present study will help provide right feedback to the prescriber.

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CONCLUSION:

The Present study showed that no polypharmacy or irrational drug use was noticed. It is hence necessary to carry forward such type of similar studies periodically to assess the rational prescribing for treatment of ocular allergies.

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