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A Study on Identification of clinical diagnosed cases and analysis of prescribing Pattern of drugs in Ophthalmology Department of a Tertiary care Hospital

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ABSTRACT

Recent studies have shown that dry eye is an inflammatory disease that has many features in common with autoimmune disease (2, 3, e1). Stress to the ocular surface (environmental factors, infection, endogenous stress, antigens, genetic factors) is postulated as the pathogenetic triggering mechanism. This is a prospective study was performed for a period of 6 months. The study was conducted in Ophthalmology department in a tertiary care hospital. A written informed consent form was obtained from the study patients. A sample size of 165 patients was enrolled in the study. Antibiotics were the most commonly prescribed ophthalmic drugs. Drug dosages, duration of therapy, strength and frequency of administration were incompletely and inadequately written in the prescription. In our study the most frequently prescribed ophthalmic drugs were antibiotics. The number of drugs per prescription and prescribing by generic names were also not in line with the WHO recommendation. We suggest that prescribers should strictly adhere to the WHO recommendations when to prescribe any of ophthalmic medications in order to promote rational use of drugs in such patients. A positive approach should be inculcated in the ophthalmologist for prescribing non-proprietary drugs preferentially from EDL.

Keywords: DNA vaccine immunogenicity, microbes, human body, transgene expression, synthetic plasmid.

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1. Introduction

Dry eye disease is defined as a “multi factorial disease of the tears and ocular surface that results in symptoms of discomfort, visual disturbance, and tear film instability with

potential damage to the ocular surface. It is accompanied by increased osmolarity of the tear film and subacute inflammation of the ocular surface”. Recent studies have

shown that dry eye is an inflammatory disease that has many features in common with autoimmune disease (2, 3, e1). Stress to the ocular surface (environmental factors, infection, endogenous stress, antigens, genetic factors) is postulated as the pathogenetic triggering mechanism. Proinflammatory cytokines, chemokines, and matrix metalloproteinases lead to the expansion of autoreactive T helper cells which infiltrate the ocular surface and lacrimal gland. The result is a vicious circle of damage to the ocular surface and inflammation.

Forms of dry eye disease

Dry eye disease is subdivided into two forms, aqueous-deficient (tear deficiency) and hyper evaporative (increased evaporation). However, mixed forms are common. Dry eye impairs functional vision, especially in reading, at the computer, or when driving. Reading speed is significantly reduced and correlates with disease severity. Tests in a driving simulator have shown significantly reduced reaction time. Reduced quality of life in everyday activities and leisure pursuits is reported by 60% of patients comparable to the decrease in quality of life reported for angina pectoris while 38% of patients complain of reduced efficiency at work. Dry eye disease is significantly associated with anxiety disorders and depression.

Anti-inflammatory treatment

Even with only moderately severe dry eye, there is an (often subclinical) inflammatory reaction of the ocular surface and the lacrimal gland. To break the vicious circle of surface damage and inflammation, anti-inflammatory treatment is required in patients with moderate to severe dry eye disease.

Topical corticosteroids

Randomized, controlled clinical studies have shown that unpreserved corticosteroid eyedrops, instilled over a period of 2 to 4 weeks, improve the symptoms and clinical signs of moderate to severe dry eye disease. After 2 weeks of treatment, symptoms regressed moderately (43%) or completely (57%). Corneal fluorescein staining reduced significantly. Patient discomfort and clinical signs remained reduced for several weeks after therapy ceased. A cycle of treatment is also useful for testing patients’ response for long-term anti-inflammatory treatment with cyclosporine A.

Diseases of the inner eye

The uveal tract:

The uveal tract is a vascular layer of tissue that is, a layer rich in blood vessels lying next to the inner surface of the sclera. It is divided into three structures: the choroid, a highly vascular layer that supplies blood to the outer layers of the retina; the ciliary body, a largely muscular tissue, which contracts and relaxes to alter the focusing of the lens; and the iris, the colored part of the eye, which forms the adjustable aperture of the eye, the pupil.

Uveitis:

Inflammations of the uveal tract are always potentially serious because of the secondary effects they may have on other intraocular structures. In most cases the disease affects either the anterior part of the uvea that is, the iris and ciliary body or the posterior part, the choroid.

2. Methodology

This is a prospective study was performed for a period of 6 months. The study was conducted in Ophthalmology department in a tertiary care hospital. A written informed consent form was obtained from the study patients. A sample size of 165 patients was enrolled in the study.

Study Design: It was Prospective observational study.

Study Period: The Present study was conducted for a period of six months from January 2021 to June 2021.

Study site: The Present study was conducted in Ophthalmology department.

Sample size: It was 165 Patients.

Type of study Patients: Out patients.

Inclusion criteria

- Patients with age of more than 18 years.
- Patients who are willing to participate in the study.
- Patients diagnosed with ophthalmology diseases.
- Patients who are prescribed with medications.

Exclusion criteria

- Patients who are not willing to give consent
- Pregnancy
- Cognitive impairment
- Patients with improper diagnosis details
- Lactation

Institutional ethics committee (IEC) consideration:

The research protocol was approved by ethical committee. The institutional ethical committee clearance was obtained from institutional human ethics committee permitted to perform the research in the general surgery department.

Patient data collection:

The patient data collection form was created with assistance of physician, teaching faculty of pharmacy practice to collect the data from medication charts. The data collection tool includes information concerning about age, sex, past medical history, and treatment. The information about drugs details, dose and frequency of administration and duration of therapy was collected from treatment chart.

Statistical analysis:

SPSS software was used for analysis and measurement data are expressed as the mean ± standard deviation. Measurement data are expressed as a percentage, the comparison of sample rates was performed by the 2 test. P<0.05 was considered to indicate a statistically significant difference.

3. Results and Discussion

Table 1: Age

In our study 25-35 years age patients were 45(3.03%), 36-45 age patients were 56 (3.63%), 46-55 age patients were 33(20%), 56-65 age patients were 31 (18.78 %).

S.No	Age	Total N=165	Percentage (%)
1.	25-35	45	3.03
2.	36-45	56	3.63
3.	46-55	33	20
4.	56-65	31	18.78
	Total	165	

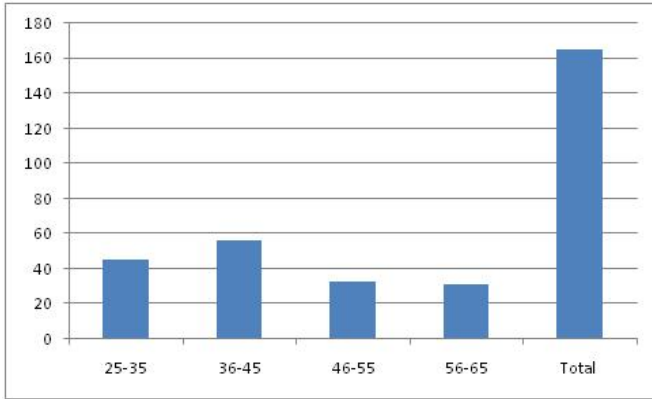


Figure 1: Age

Table 2: Gender

In our study male patients were 98 (72.59%) and female patients were 37(27.40%).

S.No	Gender	Total N=165	Percentage (%)
1	Male	105	63.63
2	Female	60	36.36
	Total	165	

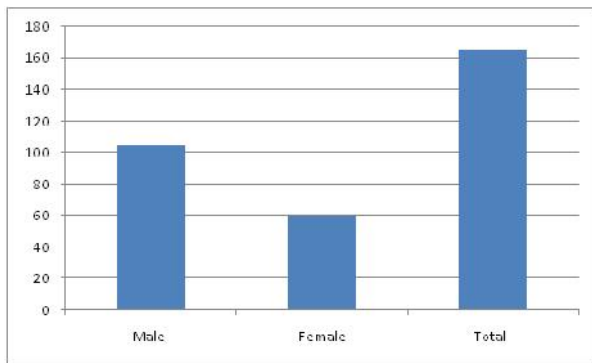


Figure 2: Gender

Table 3: Diet

Vegetarian patients were 98(59.39%) and non vegetarian patients were 67(40.60%).

S.No	Diet	Total N=165	Percentage (%)
1.	Vegetarian	98	59.39
2.	Non Vegetarian	67	40.60
	Total	165	

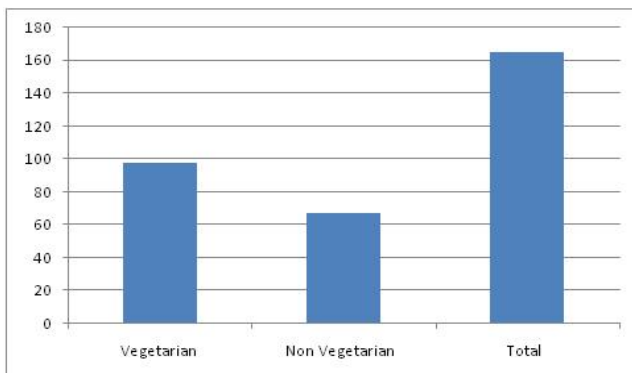


Figure 4: Diet

Table 4: Residential area

In our study urban area patients were 125 (75.75%) and rural area patients were 40 (24.24%).

S.No	Residential area	Total N=165	Percentage (%)
1.	Urban	125	75.75
2.	Rural	40	24.24
	Total	165	

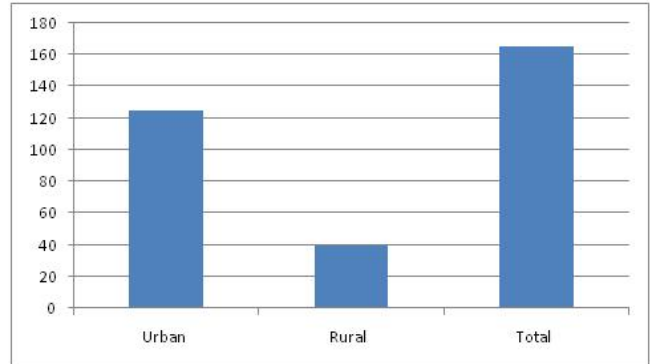


Figure 4: Residential area

Table 5: Education

The education levels of study subjects include primary education patients were 67 (40.60%), secondary education patients were 59(35.75%), graduation education qualification patients were 39 (23.63%).

S.No	Education	Total N=165	Percentage (%)
1.	Primary	67	40.60
2.	Secondary	59	35.75
3.	Graduation	39	23.63
	Total	165	

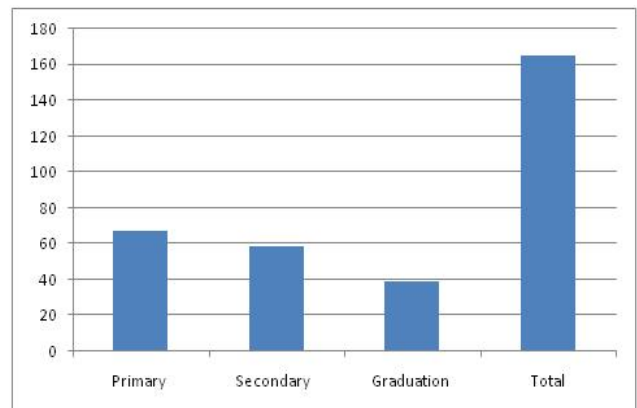


Figure 5: Education level

Discussion

- In our study 36-45 age patients were more 56(3.63%) as compared to other age groups.
- Male patients were more 105 (63.63%) as compared to female patients.
- In our study vegetarian patients were more 98(59.39%) as compared to non vegetarian patients.

- Urban area patients were more 125 (75.75%) as compared to rural area patients.
- In our study primary education patients were more 67 (40.60%) as compared to other education levels of study subjects.
- In our study married patients were more 84 (50.90%) as compared to other marital status of the patients.
- In our study 3-4 prescription drugs was more 89 (53.93%) as compared to other prescription drugs.
- Tablet forms were more 65(39.39%) as compared to other dosage forms.
- Double drug regimen was more 83 (50.30%) as compared to other drug regimen.
- Cataract diagnosis cases were more 39 (23.63%) as compared to other diagnosis cases.
- Diabetes mellitus comorbid condition patients were more 83 (50.30%) as compared to other comorbidities.
- Antibiotics prescription drugs were more 30(18.18%) as compared to other medications.
- Branded drugs were more 139 (84.24%) as compared to generic drugs.

4. Conclusion

Antibiotics were the most commonly prescribed ophthalmic drugs. Drug dosages, duration of therapy, strength and frequency of administration were incompletely and inadequately written in the prescription. Number of drugs per prescription and generic prescribing were not in line with the WHO recommendation. Prescribers should strictly adhere to the WHO recommendations when to prescribe any of ophthalmic medications especially antibiotics and should prescribe by their generic names in order to avoid irrational drug use in the study area. In our study the most frequently prescribed ophthalmic drugs were antibiotics. The number of drugs per prescription and prescribing by generic names were also not in line with the WHO recommendation. We suggest that prescribers should strictly adhere to the WHO recommendations when to prescribe any of ophthalmic medications in order to promote rational use of drugs in such patients. Both rational and irrational drug prescribing practices were prevalent in ophthalmology department. We observed values of our study draw an attention to the health care stakeholders for meticulous planning toward rational prescribing and making robust strategies for promoting it. A positive approach should be inculcated in the ophthalmologist for prescribing non-proprietary drugs preferentially from EDL.

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