



RESEARCH ARTICLE

A RETROSPECTIVE STUDY ON CORNEAL DISEASES AT A TERTIARY EYE HOSPITAL

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Manuscript Info

Manuscript History

Received: 25 January 2023

Final Accepted: 27 February 2023

Published: March 2023

Key words:-

Corneal Diseases

Abstract

Aim: To study the patterns of corneal diseases in out-patient's department of ophthalmology at tertiary care centre.

Materials & Methods: A retrospective study of the patients who presented to the ophthalmology department between 2019 July to 2021 July was done with the help of the data received from the hospital recording system. 176 Patients with only corneal disease were included. Those with corneal disease along with other ocular disease were excluded from the study. A detailed analysis was done for the same.

Results:

1. The prevalence of corneal blindness was significantly higher with increasing age(30-50 yrs)
2. The most frequent cause of corneal blindness included keratitis during adulthood (56.7%), with male Preponderance(65 %) with mean age (30-50) females (35%) with mean age (20-50), mixed ulcers being the commonest infection(78%)
3. Trauma (28.6%)
4. Corneal dystrophies and degenerations (10.6%)

Conclusion: There is a significant burden of corneal blindness in this population, the majority of which is avoidable. Eye health promotion strategies are warranted to raise awareness about the causes and prevention of corneal blindness.

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Introduction:-

1. Diseases affecting the cornea are a major cause of blindness worldwide, second only to cataract in overall importance. The epidemiology of corneal blindness is complicated and encompasses a wide variety of infectious and inflammatory eye diseases that cause corneal scarring, which ultimately leads to functional blindness. Corneal ulcer, ocular trauma, Dystrophies and Degenerations are significant causes of corneal blindness. Patient usually presents with sudden onset of pain, redness, watering, and defective vision . Usually patients have history of trauma, fall of dust, or eye rubbing.
2. Corneal ulcer is defined as disruption of epithelium with infiltration in surrounding and underlying stroma. In many of the developing countries in the world, corneal ulcer plays a major role in mono ocular blindness and visual disability. It affects all age groups, both men and women worldwide. Corneal ulcer is more commonly, a seriously infective condition which needs immediate and timely medical attention, to avoid visual disability in future.

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3. Corneal dystrophies are noninflammatory hereditary corneal disorders which are characterized by bilateral, non-vascularized corneal opacities. They mainly affect a particular layer of the cornea.
4. Corneal Degenerative conditions occur in the cornea, many of which are of clinical importance. They are distinguished from dystrophies as being, nonhereditary and usually unilateral. These are conveniently divided into three categories: primary degenerations, secondary degenerations depending on long-standing changes in the eye itself, and infiltrations associated with metabolic disturbances.

Aim:-

To study the patterns of corneal diseases in out-patient's department of ophthalmology at tertiary care centre.

Materials & Methods:-

A retrospective study of the patients who presented to the ophthalmology department between 2020 July to 2022 July was done with the help of the data received from the hospital recording system. 176 Patients with only corneal disease were included. Those with corneal disease along with other ocular disease were excluded from the study. A detailed analysis was done for the same.

Inclusion Criteria:

1. All Infectious corneal ulcers (bacterial/ viral/ fungal/ protozoal)
2. Corneal scarring due to ocular trauma
3. Corneal degenerations and dystrophies

Exclusion Criteria:

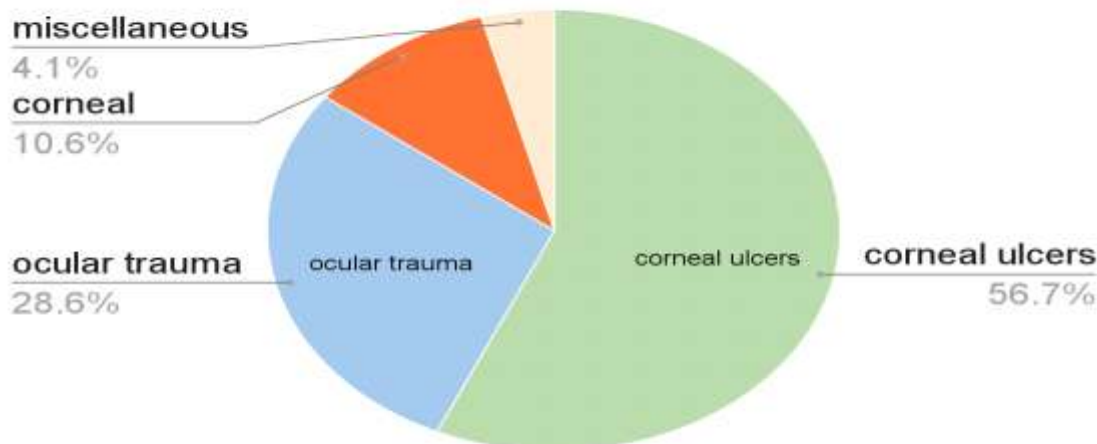
Corneal disease along with other ocular disease were excluded from the study.

Results:-

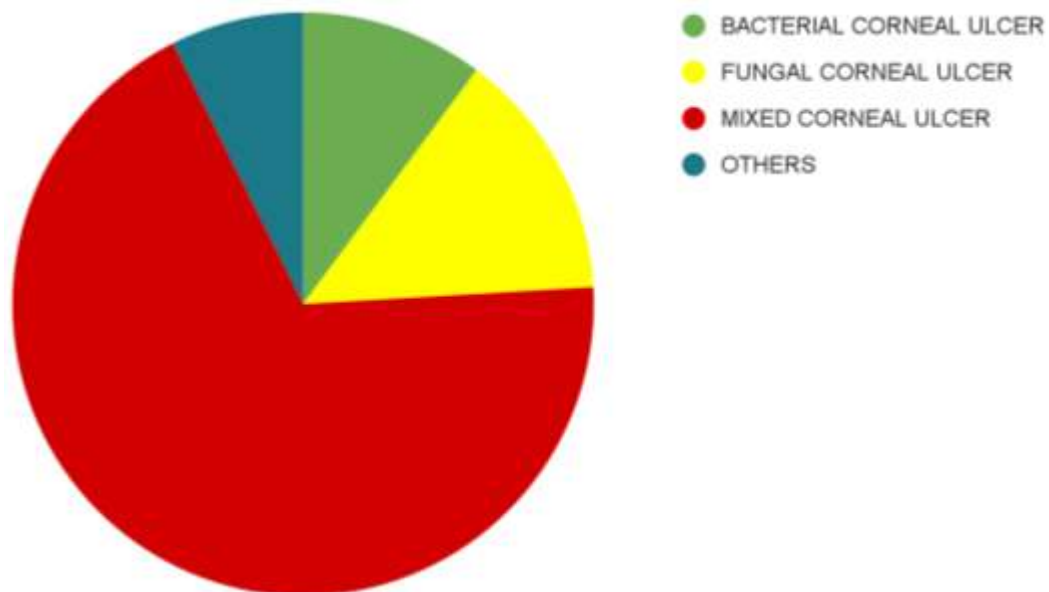
1. The prevalence of corneal blindness was significantly higher with increasing age (30-50 yrs)
2. The most frequent cause of corneal blindness included keratitis during adulthood (56.7%), with male Preponderance (65 %) with mean age (30-50) females (35%) with mean age (20-50), mixed ulcers being the commonest infection (78%),
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CORNEAL DISEASE ENTITY	TOTAL CASES	TOTAL FEMALES	TOTAL MALES
CORNEAL ULCER	108	38	70
TRAUMA	50	11	39
DEGENERATIONS AND DYSTROPHIES	18	8	10

CORNEAL DISEASES

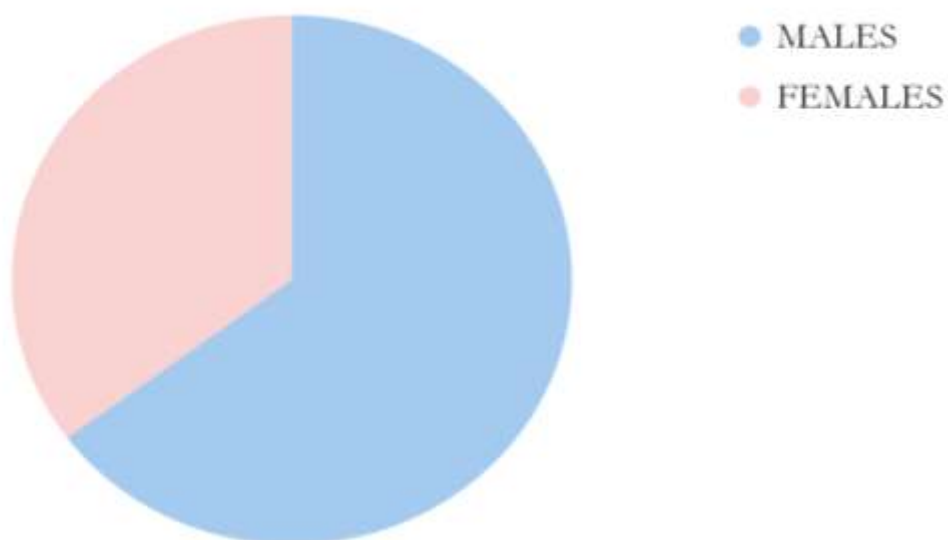


TYPES OF CORNEAL ULCER	NUMBER
Bacterial corneal ulcers	11
Fungal corneal ulcers	15
Mixed corneal ulcers	74
Others	8



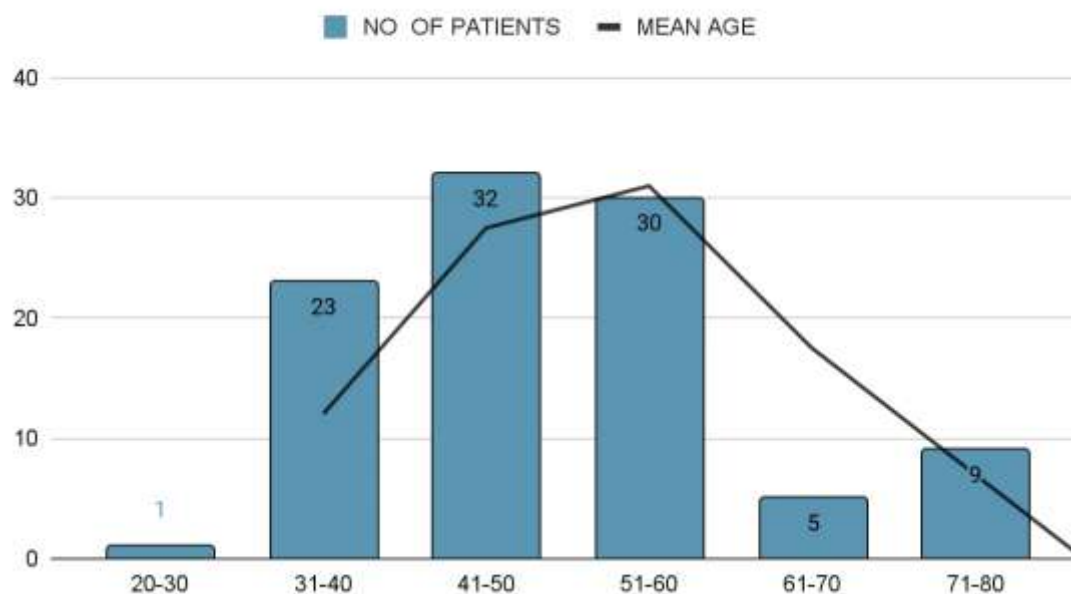
MALE	FEMALE
70	38

SEX DISTRIBUTION OF CORNEAL ULCERS



AGE GROUP	NUMBER OF CASES
20-30Y	1
31-40Y	23
41-50Y	32
51-60Y	30
61-70Y	5
71-80Y	9

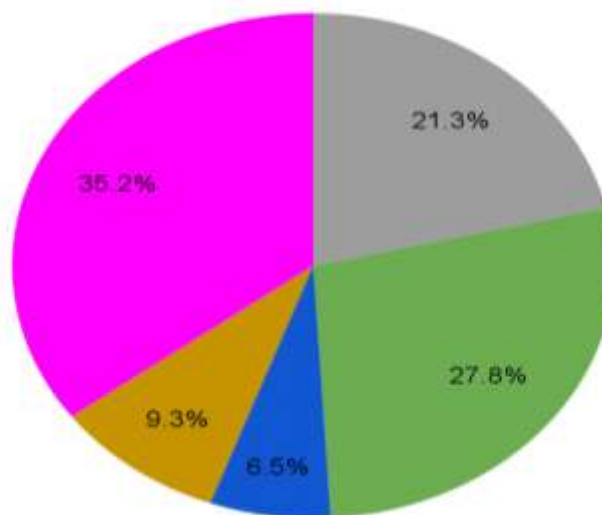
AGE DISTRIBUTION OF CORNEAL ULCERS



OCCUPATION	NO OF PATIENTS
LABOURER	23
FARMER	30
DRIVER	7
MECHANIC	10
OTHERS	38

OCCUPATION

● LABROUER ● FARMER ● DRIVER ● MECHANIC ● OTHERS

**Discussion:-**

Trauma is one of the important causes for corneal blindness, thus its spectrum covers all age groups, with greatest impact on the middle age group. Trauma to the eye leading to Infectious keratitis presents early in the course of the disease since it causes painful defective vision. If appropriately managed, vision threatening complications can be limited to a great extent.

In our study, we found the men in the 30-50 year age group to be commonly affected by infectious keratitis (mixed type of corneal ulcer) .

This could be explained by the fact that this group contributes significantly to the workforce in the society. Majority of them were illiterates and laborer's by occupation.

With successful medical management, 83 patients responded well , some of them needed intrastromal voriconazole injections. 15 patients progressed to perforation/ impending perforation, in spite of all modalities of medical management, required Therapeutic keratoplasty¹

Sengupta et al² , analyzed the changing patterns of infectious keratitis over a 7 year period in South India and found increasing incidence of fungal keratitis with a declining trend in bacterial keratitis.

Lalitha et al proposed changing economic developments and increased access to antibiotics as one of the reasons for declining trend in smear positive bacterial culture yield. In our study, we isolated mixed bacterial and fungal colonies in half of the culture positive patients.

Conclusion:-

There is a significant burden of corneal blindness in this population, the majority of which is avoidable. Eye health promotion strategies are warranted to raise awareness about the causes and prevention of corneal blindness.

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