INCIDENCE OF CURVULARIA ORGANISM IN MYCOTIC CORNEAL ULCERK. Anjaneyulu¹, Balla Vidya Sagar²**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: Study about curvularia organism in corneal ulcer conducted at REH Kurnool in coordination with Microbiology Department. After taken scrapings from corneal ulcer and inoculated in culture media at microbiology department and KOH preparation and Gram's staining done. After culture the organism isolated from growth and prepared the slide and examined under microscope. A curvularia species data collected and analyzed that there was Low incidence of curvularia organism were detected.

AIMS AND OBJECTIVES: To study the occurrence of corneal ulcers in different age groups and distribution of fungal corneal ulcer¹ in relation to sex, occupation, and causative agents and morphological type corneal ulcer and also to know the effect of Natamycin and fluconazole as antifungal agents.

MATERIAL AND METHODS:

1. Topical 4% lignocaine Hydrochloride used for anaesthetizing cornea and preserved later in a cool place.
2. Sterile universal speculum to get good exposure of ulcerated cornea and also to prevent contamination from conjunctiva and lid margins.
3. Disposable No.15 blade for scraping the ulcer.
4. Glass slides must be cleaned and grease free.
5. Gram's staining of allied materials.
6. KOH 10% preparation of allied materials.
7. Sterile culture swabs for collection of specimen and further processing for aerobic organisms for blood agar and chocolate agar plates for anaerobic organisms thioglycolate broth and saubaud's agar media for fungi.

METHODS: Anaesthetizing the cornea by instillation of 4% lignocaine⁴ drops one drop every one minute for five to ten minutes. Exposure of the cornea: by using sterile universal speculum.

OBSERVATIONS AND DISCUSSION:

INCIDENCE OF CORNEAL ULCERS: A total number of 2776 patients attended the out-patient eye department of Govt. Regional Eye hospital out of which corneal ulcers were seen in 193 cases (0.72%). From a total of 193 corneal ulcers keratomycosis were encountered in 42 cases. (0.16%) of total out-patient department cases as per table I.

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SI. NO.	TOTAL NUMVER OF CASES	PERCENTAGE (%)
OP D PATIENTS	26766	100%
CORNEAL ULCERS	193	0.72%
KERATOMYCOSIS	42	0.16%

Table 1: INCIDENCE OF CORNEAL ULCERS AND KERATOMYCOSIS

AGE INCIDENCE: The age incidence of keratomycosis² in the present study depicts as per table 2 highest incidence occurred in the age group of 31-61 years. While it is minimal in the very young patients 0-10 years and very old above 60 years age. The patients age group between 11-20 years were only 5 in number out of the 42 cases

Age group in years	No. of cases of keratomycosis	Percentage (%)
0 - 10	1	2.338%
11 - 20	5	11.90%
21 -30	7	16.66%
31-40	11	26.11%
41-50	7	16.66%
51-60	10	23.80%
60 and above	1	2.338%

Table 2: Age incidence of keratomycosis

SI. NO.	DISTRICRIPTION	NO.OF ULCERS.	PERCENTAGE
1.	FUNGAL POSITIVE	42	21.7%
2.	BACTERIAL POSITIVE	98	50.7%
3.	CULTURE NEGATIVE	53	27.5%

Table 3: INCIDENCE OF CULTURE OF BACTERIAL, FUNGAL AND STERILE ULCERS.

SI. NO.	DISCRIPTION	NO.OF ULCERS	PERCENTAGE
1.	CULTURED ONLY ONE FUNGUS	37	88%
2.	MORE THA ONE FUNGUS	1	2.3%
3.	BACTERIAL AND FUNGUS	4	9.5%

TABLE 4: INCIDENCE OF ULCERS ONLY FOR ONE FUNGUS OR MORE THAN ONE FUNGUS OR BACTERIAL AND FUNGUS

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SL. NO.	FUNGUS ENCOUNTERED	NO. OF TIMES ENCOUNTERED	PERCENTAGE (%)
1.	ASPERGILUS SPECIES.	21	50%
	A) ASP. FLAVUS	09	
	B) ASP. FUMUGATUS	07	
	C) ASP. NIGAR.	05	
2.	CANDIDA ALBICANS	06	14.2%
3.	PENCILIUM SPECIES	05	11.9%
4.	RIZOPUS	02	4.7%
5.	CEPHALOSPORIUM	03	7.1%
6.	FUSARIUM SPECIES	03	7.1
7.	CURVALARIA SPECIES	02	4.7%

TABLE 5: TYPES OF FUNGI ISOLATED IN THE PRESENT SERIES OF KERATOMYCOSIS

SL. NO	FUNGUS WITH BACTERIA	NUMBER OF CASES
1.	ASPERGILUS FUMIGATUS WITH KLEBSIELLA SPECIES	2
2.	ASPERGILUS NIGAR WITH COAGULASE +VE STAPH.COCCI	2

TABLE 6: BACTERIAL ENCOUNTERED ALONG WITH FUNGI

SEX	NO. OF CASES	PERCENTAGE (%)
MALE	29	69%
FEMALE	13	30.9%

TABLE 7: SEX INCIDENCE OF KERATOMYCOSIS

END RESULT	NUMBER OF CASES	PERCENTAGE
HEALING WITH CORNEAL OPACITIES AND WITH ADEHRENT LEUCOMA AND SECONDARY GLAUCOMA	19	45.23%
COMPLICATED CATARACT	16	38.09%
PERFORATION WITH PHTHISIS	04	9.523%
ULCER NECESSIATING EVISCERATION	03	7.142%

TABLE 8: END RESULTS AFTER TREATMENT OF CORNEA ULCERS

DISCUSSION: In the present study fungal corneal ulcers are found to be higher as compared to P. Siva Reddy et al (i.e, 0.06%). It may be due to indiscriminate use of local steroids and higher antibiotics following agricultural injury to the eye now-a-days.

Regarding age incidence highest incidence occurred in the age group of 31-60 years. While minimal 0 – 10 years and above 60 years.

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The incidence of fungal ulcers in the present series is found to be 21.7%. Incidence of ulcers for one fungi or more than one fungi or both bacteria and fungus occurred.

The highest incidence of fungi in the study are *Aspergillus* Species fifty percent (50%).³ Next higher incidence was *Candida albicans* (14.2%) and lowest incidence was *Curvalaria*⁴ infection i.e., 4.7%.

The higher incidence in males due to greater exposure to outdoor activities and prompt attendance of males in hospitals because of they are the breadearners. Higher incidence in the females blame the use of cosmetics like kajal or surma in the causation of keratomycosis.

Present study shows that Natamycin 5% eye drops are effective against *Aspergillus*, *penicilum*, *rizopus*, *cephalosporium* and *fusarium* species. Fluconazole effective against the *Candida albicans*. Fungal corneal Ulcers without Hypopyon exhibited good response to Natamycin 5% eye drops.

SUMMARY AND CONCLUSION: This study comprises of total number of 193 cases of corneal ulcers screened out of 26766 patients attending the Regional Eye Hospital, Kurnool. (AP). Out of 193 cases 42 cases showed positive fungal culture in saubraud's media. Incidence of disease was high in 31-60 years age group.

This explained by the fact that the people in this age group are commonly exposed to trauma due to outdoor activities.

Keratomycosis is more common in males (69%) than females (30.9%) because of greater exposure to outdoor activities and prompt attendance males in hospitals. In case of females they work in the field during harvesting period and are equally susceptible for agricultural injuries thus giving rise to a sizeable number of cases.

In the present study of keratomycosis due to *Candida albicans* responded favourably use of fluconazole 0.3% eye drops. Mycotic Keratitis caused by *Aspergillus*,⁵ *Penicilum*, *Fusarium*, *Rizopus* and *Curvalaria* are responded favorably to Natamycin 5% eye drops. The filamentous fungi are responded well to Natamycin 5% eye drops.

The end result of large percentage of cases ended with Leucomas and evisceration and hence visual prognosis were found to be poor.

Lack of broadspectrum antifungal medicines⁶ for ophthalmic use was a depressing observation. Steps to improve ophthalmic care and treatment in the periphery and rural areas should also be taken to lower the incidence of keratomycosis along with other ophthalmic diseases.

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