



Ocular Manifestation Of Skin Disorders in Central Part Of India.

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Abstract

Background: To study the prevalence of ocular manifestation in relation to skin disorders and to analyse its distribution of potential sight threatening lesions at tertiary care centre in central part of India.

Material and Methods: It was a cross sectional study conducted on 1440 patients of skin disorders attending OPD and IPD of Dermatology department of a tertiary care centre in Amravati district from February 2021 to July 2022.

Results: Of the 1440 patients with skin disorders, 165 patients were found to have ocular manifestations giving a prevalence of 11.46%. 88 (53.33%) were males and 77(46.67%) were females. The most common skin disorder with ocular manifestations was acne rosacea (16.36%) followed by acne vulgaris (13.94%) and pemphigus (11.52%). The most common chief complaint was redness (32.12%), watering of eyes (21.82%) and dryness (21.21%). Herpes Simplex Virus (25.00%), Neurofibromatosis (20.45%), Herpes Zoster Ophthalmicus (18.18%), Xeroderma pigmentosa (9.09%), sarcoidosis (9.09%), leprosy (6.82%), Sturge weber syndrome (6.82%), and Sjogren syndrome (4.55%) were the common sight threatening diseases associated with skin disorders.

Conclusion: Higher prevalence of ocular manifestations and sight threatening disorders in patients with skin disorders was found in our study, so it is necessary for every patient with skin disorder to undergo a complete ocular evaluation.

Keywords: Ocular Manifestation, Sight threatening, Skin Disorder

Introduction

Skin and eyes share a common embryological origin that is surface ectoderm. The range and severity of ocular involvement in skin disorders is thought to be due to the various biochemical and ultrastructural similarities between the two. Thus, ocular manifestations are one of the most important and common associations of dermatological diseases.^[1,2]

The integumentary system consists of the skin and its specialized structures including hairs, nails, sweat glands, mammary glands and teeth. It is formed by all embryonic layers.^[3] There exists a wide range of

multisystem diseases that affects both skin and the eyes. Skin and eye findings may be the initial manifestation that can lead to a new diagnosis of systemic diseases.^[4]

Skin diseases like Herpes simplex virus keratitis, Xeroderma pigmentosa, Leprosy, Neurofibromatosis are known to cause keratitis, corneal ulcer, uveitis and complicated cataract and ultimately cause blindness.

Therefore, many skin disorders presents with mild to severe ocular manifestations that can result in visual

impairment, and sometimes it can even cause vision loss. The early detection of the association between ocular manifestations and skin disorders is important to prevent ocular morbidity. so it is important to screen the patients with skin disorders for ocular manifestations thoroughly and collaboration between ophthalmologist and dermatologist may decrease the risk of serious or irreversible visual impairment.

Aim & Objectives

To study the prevalence of ocular manifestation in relation to skin disorders and to analyse its distribution of potential sight threatening lesions at tertiary care centre in central part of India.

Material and Methods:

It was a cross sectional study on patients of skin disorders attending OPD and IPD of Dermatology department of a tertiary care centre in Amravati district from February 2021 to July 2022 (18 months).

All the patients with skin disorders were evaluated in detail after taking informed consent and procedure. Patients with pre-existing diseases like hypertension, diabetes and contact lens users were excluded in our study. Detailed history followed by a detailed physical and ophthalmic examination has been carried out in patients of skin disorders.

The study follows the declarations of Helsinki and institutional ethical committee.

The data was collected, compiled, and analysed using EPI info (version 7.2). The qualitative variables were expressed in terms of percentages. The quantitative variables were categorized and expressed in percentages or terms of mean and standard deviations percentages. The difference between the two proportions was analysed using the chi-square or Fisher exact test. All analysis was two-tailed, and the significance level was set at 0.05.

Results

In this study total 1440 patients with skin disorders were included out of which 165 were found to have ocular manifestations giving a prevalence of 11.46%.(Graph 1)

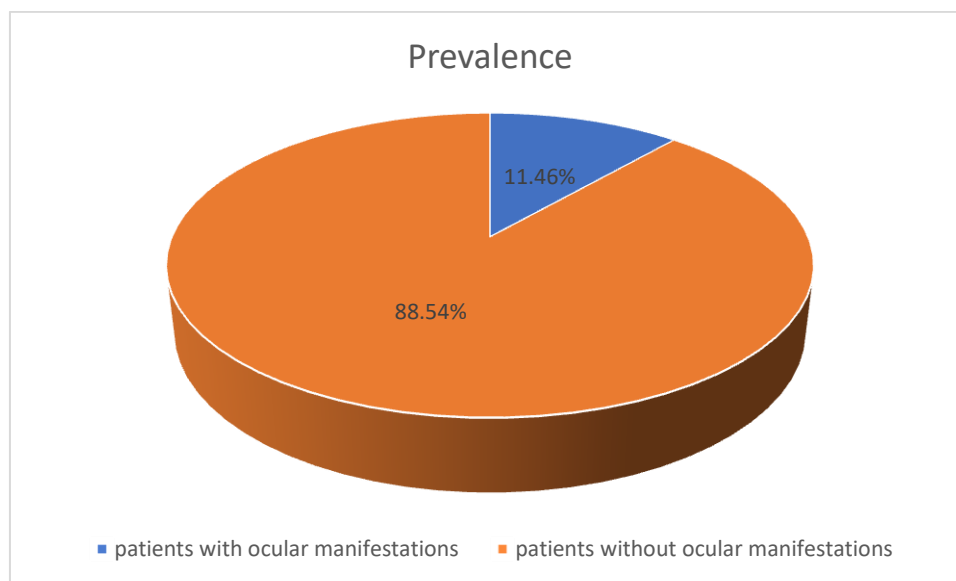
Out of 1440, 88 (53.33%) were males and 77(46.67%) were females

The most common skin disorder with ocular manifestations was acne rosacea (16.36%) followed by acne vulgaris (13.94%) and pemphigus (11.52%) in the present study.(Graph 2)

The most common chief complaint was redness (32.12%), watering of eyes (21.82%) and dryness (21.21%) in the present study.(Table 1)

In the present study, Herpes Simplex Virus (25.00%), Neurofibromatosis (20.45%), Herpes Zoster Ophthalmicus (18.18%), Xeroderma pigmentosa (9.09%) and sarcoidosis (9.09%) were the most common sight threatening diseases associated with skin disorders.(Table 2).

Graph 1: Prevalence of Ocular Manifestation in skin disorders



Graph 2: Distribution of skin disorders

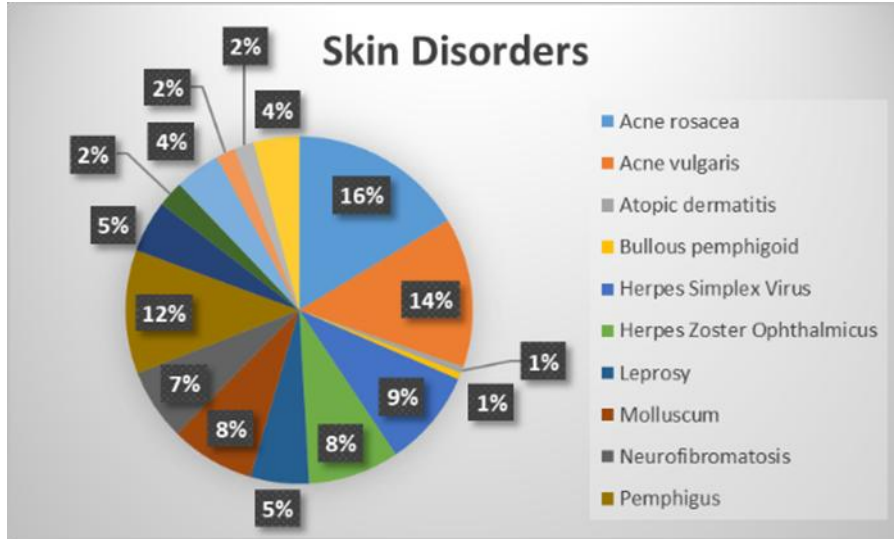


Table 1: Distribution according to Chief Complaints

Chief complaints	Frequency	Percentage
Blurring of vision	18	10.91
Dryness	35	21.21
Foreign body sensation	1	0.61
Inability to close eyes	6	3.64
Irritation	48	29.09
Wart over lid	1	0.61
Loss of eyelashes	3	1.82
Pain	24	14.55
Photophobia	1	0.61
Redness	53	32.12
Swelling	22	13.33
Watering	36	21.82

Table 2: Distribution of sight threatening skin disorders

Skin disorders	Sight threatening			
	Yes (n=44)		No (n=121)	
	Frequency	%	Frequency	%
Acne rosacea	0	0	27	22.31
Acne vulgaris	0	0	23	19.01

Atopic dermatitis	0	0	1	0.83
Bullous pemphigoid	0	0	1	0.83
HSV	11	25.00	4	3.31
HZO	8	18.18	6	4.96
Leprosy	3	6.82	6	4.96
Molluscum	0	0	13	10.74
Neurofibromatosis	9	20.45	2	1.65
Pemphigus	0	0	19	15.70
Psoriasis	0	0	8	6.61
Sarcoidosis	4	9.09	0	0
Scleroderma	0	0	7	5.79
Sjogren's syndrome	2	4.55	1	0.83
Sturge weber syndrome	3	6.82	0	0
Xeroderma pigmentosa	4	9.09	3	2.48

Image 1 : Corneal opacity in Xeroderma Pigmentosa



Image 2 : Dendritic ulcer in Herpes Simplex Virus

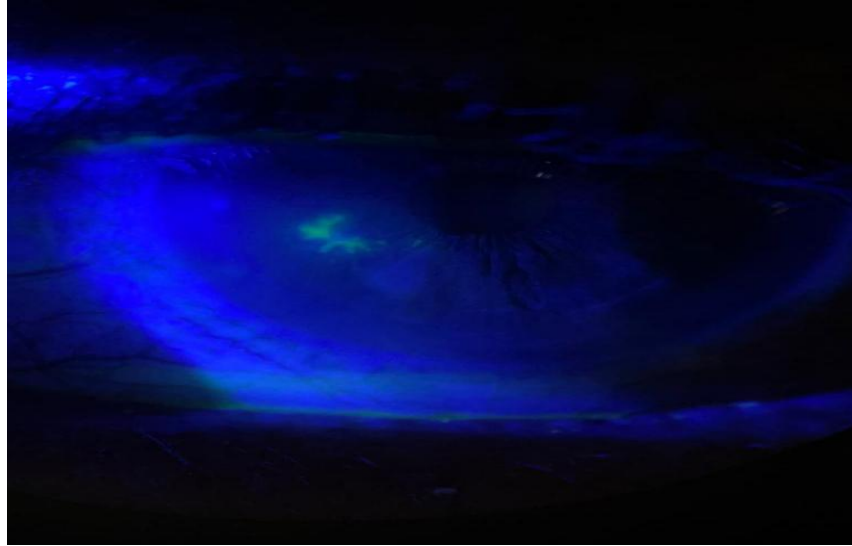


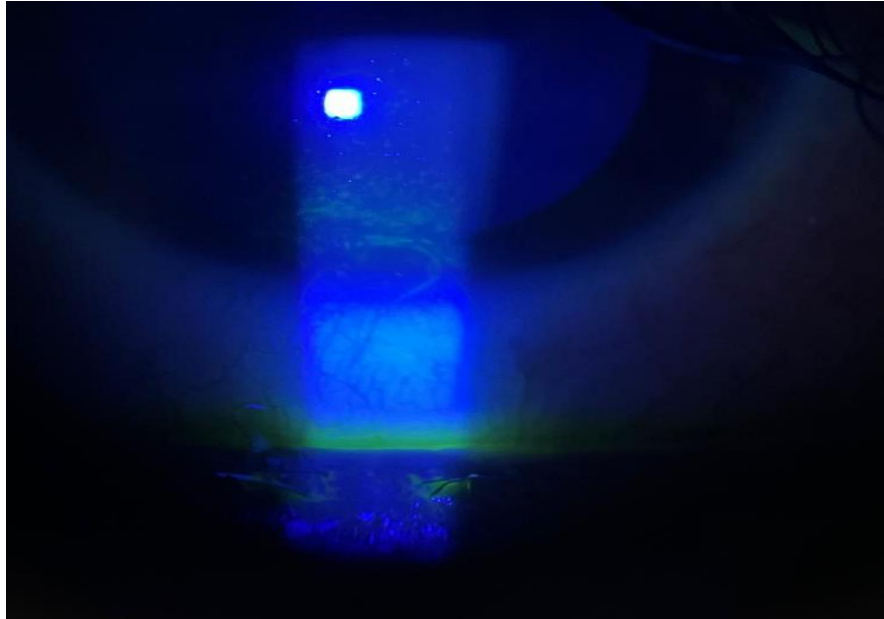
Image 3 : Herpes Zoster Ophthalmicus



Image 4 : Sjogren syndrome



Image 5 : Dry eye in Scleroderma



Discussion

In our study, total prevalence of ocular manifestation in skin disorders was found to be 11.46%. The mean age of the cases was 36.33 years. 53.33% were males and 46.67% were females. Similar male preponderance and mean age were found in study by Rizwal et al^[5], Ruggeiro et al^[6].

In our study, the most common chief complaint was redness (32.12%), watering of eyes (21.82%) and dryness (21.21%) and most common skin disorders were acne rosacea (16.36%), acne vulgaris (13.94%) and pemphigus (11.52%).

In a study conducted by Rizwal et al^[5], allergic dermatitis in 38% patients was the most common type of dermatitis followed by atopic dermatitis in 36.6% patients and contact dermatitis in 18.3% patients. In a study conducted by Damor V et al.^[7] 22.2% patients had HZO, 12% patients had HSV, 11.4% patients had acne, 11% patients had NF, 9.8% patients had +leprosy and 7% patients had psoriasis. In a study conducted by Subramanian et al.^[8] 38% patients with symptomatic ocular manifestations, found that 28%, 25%, 17%, 2% of the patients manifested with evaporative dry eye, blepharoconjunctivitis, redness and episcleritis respectively.

References

In our study, we found that Herpes Simplex Virus (25.00%), neurofibromatosis (20.45%), Herpes Zoster Ophthalmicus (18.18%), Xeroderma Pigmentosa (9.09%), sarcoidosis (9.09%), leprosy (6.82%), Sturge weber syndrome (6.82%), Sjogren syndrome (4.55%), were common sight threatening diseases associated with skin disorders. Among all patients with skin disorders examined about 26.66% of them were found to have sight threatening disorders which is in concurrence with a study conducted by Pittol et al^[9], legal blindness was detected in 6% and visual impairment related to skin conditions in 16.5% of patients.

Conclusion:

In our study a high prevalence of ocular manifestations in patients with skin disorders is found. Acne rosacea, acne vulgaris and pemphigus are most frequent skin disorders having ocular manifestations. The sight threatening diseases associated are herpes simplex virus, herpes zoster Ophthalmicus, neurofibromatosis, Xeroderma Pigmentosa, sarcoidosis, leprosy, Sturge weber syndrome and Sjogren syndrome. The potential sight threatening complications such as keratitis, corneal ulcer, corneal opacity, uveitis must be prevented by early detection and treatment. So, it is necessary for every patient with skin disorder to undergo a complete ocular evaluation.

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