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A ClinicalStudyof Ocular Manifestationsand Their Complications in Psoriasis.

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Abstract:

Introduction: *Psoriasis is a common, chronic, inflammatory, systemic disease with major manifestations in the skin. It can present with persistent scaly plaques, flaking, itch, pain, and, more rarely, widespread erythroderma and pustules. There is a significant impact of disease severity on patient-reported psychosocial and physical quality of life, including loss of work productivity. Ophthalmic complications of psoriasis are numerous and affect almost all parts of the eye.*

Materials and Methods: *An observational study was conductedon 40 patients of psoriasis with positive skin biopsy and referred from the department of dermatology to Government regional eye hospital, Kurnool, from Aug 2018 to Oct 2019. A comprehensive ocular examination was done, including anterior segment and ocular surface evaluation.*

Results: *Prevalence of ocular manifestations and complications was 55% (22 cases) in our study. Various ocular manifestations were conjunctivitis 12 cases (30%), dry eye10 cases(25%), meibomitis 7 cases (17.5%), cataract 15 cases(37.5%), and uveitis 3 cases(7.5%). Ocular complications were superficial punctate keratopathy, corneal opacity, trichiasis and posterior synechiae.*

Conclusion:*Ocular involvement in psoriasis is observed, and the manifestations are numerous, so a comprehensive eye examination is essential for early identification.*

Keywords:*Psoriasis, Dry eye, conjunctivitis, Uveitis, cataract.*

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I. Introduction

Psoriasis is a common, chronic, inflammatory, systemic disease with major manifestations in the skin with recurrent relapses, the course of which can be altered by environmental factors. It affects about 3–4% of people worldwide. This global prevalence of psoriasis is variable in different countries and regions all over the world. According to a 2013 systematic review, it was found that psoriasis was more frequent in Caucasian populations when compared to non-Caucasians. Furthermore, East African countries have a higher reported prevalence of the disease compared to West African countries. The reported prevalence in India is 0.7%. Various morphological types of psoriasis are chronic plaque-type, guttate, pustular, erythrodermic. The classical lesions are well-demarcated plaques on an erythematous base with silvery scales on the surface. Psoriasis is known to classically affect the skin, nails, and joints. However, it is now clear that psoriasis is a multisystem chronic inflammatory disorder with associated comorbidities. This emphasizes the need for a multidisciplinary approach to manage these patients and control their comorbidities.

Ophthalmic complications are numerous and generally tend to occur much later after the skin involvement. Consequences of ocular manifestations are often neglected, and surveys into the quality of life implications of psoriasis mostly do not give importance to ocular symptoms. Ocular manifestations are subtle and are often overlooked. If Ocular examinations could be carried out at regular intervals, patients with Psoriasis

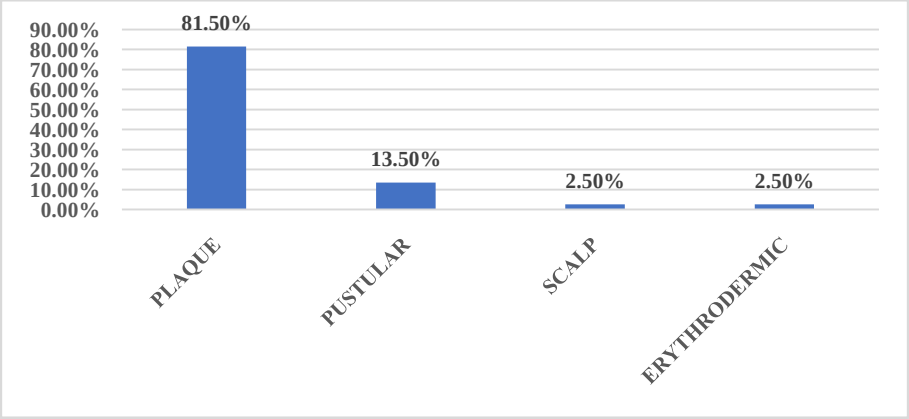
would be benefited. Commonest ocular manifestations being dry eyes and blepharitis. Others include pinguecula, punctate keratitis, cataract, uveitis, glaucoma and retinal microvascular abnormalities.

II. Materials and Methods

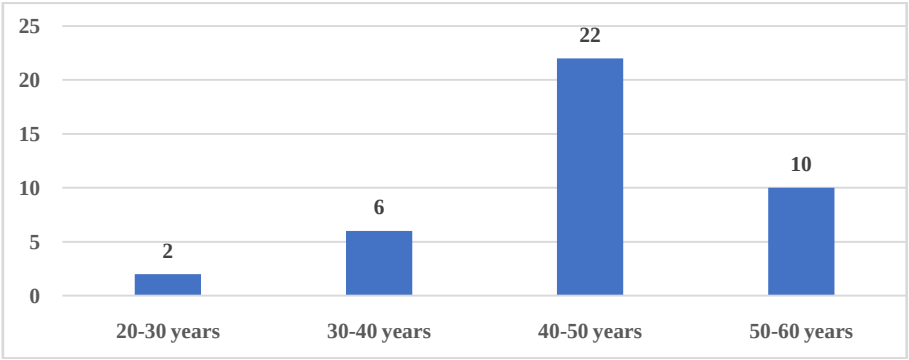
An observational study was conductedon 40 patients who were positive on skin biopsy for psoriasis and referred from the department of dermatology to Government regional eye hospital, Kurnool, from Aug 2018 to Oct 2019. Patients aged between 20 to 60 years with the clinical diagnosis of psoriasis and confirmed with skin biopsy were included. Patients having immunosuppression, rheumatoid arthritis, steven johnson syndrome and patients on chronic topical ophthalmic medication were excluded. Informed and written consent was taken from all the patients. A detailed history was taken including the duration of disease and treatment taken. No patients were on systemic therapy. A comprehensive ophthalmic examination by slit lamp was done and eyelids, conjunctiva, cornea, anterior chamber, the lens were examined. Ocular surface evaluation was done by fluorescein and rose Bengal staining, TBUT, Schirmers test without the use of topical anaesthesia. The Schirmer test less than 10mm andTUBT below 10 sec were considered abnormal. Intraocular pressure measurement, lacrimal sac syringing and fundus examination were done in all patients.

III. Results

Graph:1 Distribution of type of psoriasis: Out of 40 patients in the study, 33(81.5%) cases were with plaquetype of psoriasis, 5(13.5%) cases were with pustular type, 1(2.5%) case was with scalp involvement, 1(2.5%) case was erythrodermic psoriasis.



Graph:2 Age distribution: Out of 40 patients, 2 cases(5%) were between the age of 20-30 years, 6 cases(15%) were between 30- 40 years, 22 cases(55%) were between 40-50 years and 10(25%) cases were between 50-60 years of age.



Graph:3 Gender distribution: Out of 40 cases, 25(62.5%) were females and 15 cases (37.5%) were males.

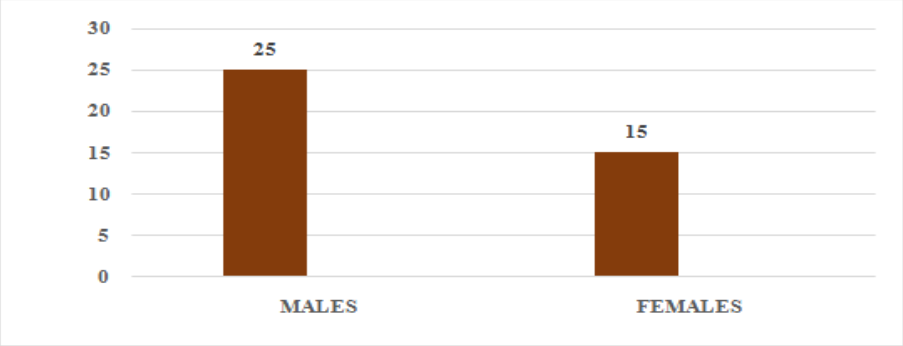


Table:1 Table showing abnormal TBUT, Schirmers, fluorescein and Rose bengal staining
Out of 40 cases, TBUT was abnormal in 25% cases, Schirmer test was abnormal in 14.5% cases, positive fluorescein staining was seen in 14.5% cases, positive rose Bengal staining was seen in 6.25% cases, abnormal TBUT+ Schirmer's test is seen in 12.5% cases, all the four tests were abnormal in 6.25% cases.

Test type	Percentage of cases
TBUT	25%
Schirmers test	14.5%
Fluorescein staining	14.5%
Rose Bengal staining	6.25%
TBUT+ schirmers test	12.5%
All 4 test types	6.25%

Table:2 Ocular manifestations in psoriasis
Ocular manifestations were observed in 22 cases (55%) out of 40 cases in the present study, and the overlap of manifestations is seen.

Ocular manifestations	Number of patients	percentage
Cataract	15	37.5%
conjunctivitis	12	30%
Dry eyes	10	25%
meibomitis	7	17.5%
Anterior uveitis	3	7.5%

Table:3 Ocular complications in psoriasis

Ocular complication	Number of patients	percentage
Superficial punctate keratopathy	5	12.5%
Corneal opacity	5	12.5%
trichiasis	3	7.5%
Posterior synechiae	1	2.5%

IV. Discussion

In the present study, the prevalence of ocular manifestations and their complications was found to be 55%. Kilic B et al.found the prevalence of ocular manifestations to be 58%, which is similar to the present study. Chandran et al., Erbagci I et al. found the prevalence was approximately 67% in psoriasis patients.

The common ocular manifestations and complications in the present study were conjunctivitis, meibomitis, dry eyes, cataract, anterior uveitis, superficial punctate keratopathy, corneal opacity, trichiasis, posterior synechiae.

Conjunctivitis in the present study was found in 12 cases (30%).Published articles have suggested conjunctivitis prevalence rates in psoriasis patients as high as 64.5%. It is a commonly occurring eye condition that can be caused by psoriasis, but it is more commonly due to allergies, bacterial, or viral infection.

In the present study, cataract was seen in 15 cases (37.5%), and it is more common in elderly patients. 6 eyes had cataract in below 50 years age group; this may be due to PUVA therapy in humans with increased risk of ocular lens abnormalities. Chandran et al. found that 63% of cases had cataract.

Dry eye was seen in 10 cases (25%) in the present study. Some studies suggest prevalence rates of dry eye as 2.7% and 18.75%.

Uveitis was found in 3 cases (7.5%). These patients had plaque type psoriasis. There were no signs of psoriatic arthropathy. These results are compatible to several studies. Few studies relate uveitis with psoriatic arthropathy, while some studies found it as an independent entity.

Complications found in our study were superficial punctate keratopathy 5 cases 12.5%), corneal opacity 5 cases (12.5%), trichiasis 3 cases (7.5%), posterior synechiae 1 case(2.5%). Erbagci et al. found corneal opacities in 4 eyes in his study on 31 patients. One patient who had uveitis had posterior synechiae. The retinalexamination revealed no abnormality.

V. Conclusion

Ocular involvement in psoriasis is observed, and the manifestations are numerous, so a comprehensive eye examination is essential for early identification. Ocular manifestations are subtle and are often overlooked. If Ocular examinations could be carried out at regular intervals, patients with Psoriasis would be benefited.

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