



A CROSS SECTIONAL STUDY ON THE EYE MANIFESTATIONS IN SUBJECTS WITH PSORIASIS

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ABSTRACT

Aim: To study the association of ocular manifestations in patients with psoriasis and psoriatic arthritis. **Patients and methods:** A cross sectional study comprising of 100 patients with clinical diagnosis of psoriasis of various types was undertaken. The subjects were classified into mild and severe forms based on PASI scores. Thorough history and clinical examination was done. History regarding psoriatic arthritis was provoked. All the subjects were screened for the ocular involvement by means of slit lamp examination and posterior segment evaluation. **Results:** In-significant results were obtained- one patient had episcleritis and 4 patients had age related cataracts. Conjunctival xerosis, conjunctivitis, and uveitis were not found in any of the patients. **Conclusion:** Multi-centric larger studies are required in our population living with psoriasis, to confirm the ocular involvement among them.

Key words: Psoriasis, Psoriatic arthritis, Uveitis, Episcleritis, PASI score.

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| Home page: http://www.mcmed.us/journal/ijacr | | Quick Response code |
| DOI: http://dx.doi.org/10.21276/ijacr.2017.4.1.10 | | |
| Received: 25.12.16 | Revised: 12.01.17 | Accepted: 15.01.17 |

INTRODUCTION

Psoriasis is a chronic, systemic, immunologically mediated, proliferative skin disease, with significant genetic and environmental influences. Prevalence of psoriasis ranges from 1.5 to 3% of the world's population. Recently, the relation between psoriasis and different comorbidities, particularly ocular manifestation has become extremely relevant of which uveitis is of an important consideration as early diagnosis and treatment can be vision saving [1]. Overall, the ophthalmological manifestations occur in

about 10% of the cases of psoriasis and include blepharitis, xerophthalmia, conjunctivitis, keratitis, corneal abscess, cataract, symblepharon, orbital myositis, chorioretinopathy, uveitis and ectropion with trichiasis and madarosis secondary to skin lesions involving the eyelids [2-5]. Of all the ocular manifestations conjunctivitis is reported as the most common ocular manifestation followed by iritis [6-7]. Herein we report our negative experience on the eye manifestations among the subjects having psoriasis in our locality.

METHODS

We conducted a cross sectional study over 100 patients (56 males, 44 females) presenting to our OPD between July 2015 and October 2016, who were clinically diagnosed as psoriasis of various clinical

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types. The subjects were classified into mild and severe forms based on PASI (Psoriasis Assessment clinical examination. History regarding psoriatic arthritis was provoked. All the subjects were screened for the ocular involvement by means of torch light examination, slit lamp examination and posterior segment evaluation. All the participated subjects gave their informed consent and the ethical clearance was obtained from the local ethical committee.

RESULTS

Out of 100 subjects with psoriasis been evaluated, 79% of cases (n=79) belonged to the group of PASI score been less than 10 (Mild psoriasis) and 21% of cases (n=21) belonged to the group of PASI score greater than 10 (Severe psoriasis). Of these 21 cases 7 cases had erythroderma secondary to psoriasis and 1 case had pustular psoriasis. 7% of cases (n=7)

Severity Index) scores. All the patients were subjected to a detailed history including ocular history and had evidence of psoriatic arthropathy. The duration of psoriasis among the evaluated patients was ranging from 2 months on lower side to 35 years on the higher end with a mean duration of 4 years and 3 months. People with psoriasis of age 9- 82 years, with a median age of 40 years were included in the study. Of all the cases with psoriasis evaluated for the ocular involvement, only one male of age 32 years had episcleritis in both the eyes [Fig.1] [Table 1]. He was treated with a course of anti-inflammatory eye drops and the lesions cleared. Four other cases had cortical cataract and were seen in people with the age above 60 years. None of the subjects showed more frequently reported ocular manifestations like conjunctivitis, and uveitis (iritis).

Table 1. Observations

| S. No | Age/Sex | Duration of Psoriasis | PASI Score | Psoriatic Arthropathy | Ocular Findings |
|-------|---------|-----------------------|------------|-----------------------|------------------------|
| 1 | 64/F | 10 years | 3 | No evidence of PsA | Cataract both eyes |
| 2 | 62/F | 5 years | 1.2 | No evidence of PsA | Cataract both eyes |
| 3 | 67/M | 1 year and 6 months | 8 | No evidence of PsA | Cataract both eyes |
| 4 | 32/M | 4 years | 1.2 | No evidence of PsA | Episcleritis both eyes |
| 5 | 63/ F | 6 years | 1.8 | No evidence of PsA | Cataract both eyes |

Figure 1. Episcleritis in a male aged 32 years with mild psoriasis.



DISCUSSION

The association between psoriasis and involvement of eyes is a relatively recent and emerging concept [1-4]. No clear cut incidence of ocular involvement is reported. Uveitis is recognized by the presence of pain, photophobia, eye lid swelling, circumciliary injection and visual disturbances. Permanent loss of vision is the most dreaded complication. Various causes include immune mediated diseases including psoriasis (40%), infections (30%), and idiopathic (30%). Various animal studies have linked the involvement of T-helper cell- 1 and Th- 17 with production of TNF α , common to the pathogenesis of uveitis and psoriasis [3, 9]. It has been stated that uveitis develop more

frequently in patients with psoriatic arthropathy or pustular forms of psoriasis and with sebo - psoriasis than in patients with other forms of psoriasis [8, 11]. Uveitis in patients with psoriatic arthropathy is more likely to be insidious in onset, continuous, more frequently involving anterior segment (i.e. iritis), and been active bilaterally [10]. Uveitis is been reported to occur in 7-25% of the patients having psoriasis [2, 3]. A Danish nationwide cohort study by Egeberg A et al; revealed the Incidence rate of uveitis as 2.02 %, 2.88 %, 4.23 %, and 5.49 % for the reference population and those with mild psoriasis, severe psoriasis, and psoriatic arthritis, respectively [1]. But our study showed no association of uveitis with either of mild psoriasis, severe psoriasis, and with psoriatic arthritis.

Conjunctivitis is been reported as most common eye manifestation in psoriasis, with prevalence rates as high as 19.6% in subjects with psoriatic arthropathy [7]. It is more commonly caused by allergies, bacterial infection, or viral infection. The commonest presentation is generalized conjunctival congestion with gritty discomfort, mild photophobia, and a possible discharge. Visual acuity has been rarely affected. Obstructive meibomian gland dysfunction was noted increasingly in psoriatic patients, possibly suggesting an underlying cause for the relationship between conjunctivitis and psoriasis [12]. Our study also showed no association of psoriasis with conjunctivitis. Episcleritis (inflammation of the tissue layer covering the sclera) may also occur in conjunction with psoriasis and presents with hyperaemia (increased blood flow) that may present as red eye with mild tenderness and watering. One study shows 2 out of 112 patients with psoriasis (1.8%) having episcleritis with the least significance [7]. Our study showed only one patient aged 32 years with episcleritis who complained of red eye of 10 days duration with minimal scaly skin lesions only over extensors of elbows (PASI- 1.2) of four years duration. He had no history suggestive to look for psoriatic arthropathy. Treatment with anti-inflammatory eye drops lead to resolution of eye symptoms on follow up. Cataract has been reported in a study with a prevalence of 63% in patients with psoriasis of age less than 50 years [4]. Long term

usage of steroids and phototherapy is associated with increased risk of cataract [13]. Our study revealed cataract in 4 patients who were greater than 60 years of age, not on any form of phototherapy and systemic steroids; accounting to the age related degenerative changes in the lens.

CONCLUSION

Psoriatic eye manifestations, particularly uveitis is been spoken more recently outnumbered times. Higher prevalence of ocular involvement is reported in patients with psoriatic arthropathy. In spite of extensive evaluation of eyes in all the patients with psoriasis and with psoriatic arthropathy, we did not find any significant ocular involvement in them. Therefore, the need to investigate these patients is questioned in absence of any ocular symptom. More research on the relationship between the ocular involvement and psoriasis is needed on a wider scale. In particular greater understanding on pathophysiology of psoriatic eye manifestations are required. Long-term follow-up of patients with psoriasis might yield a positive relation.

ACKNOWLEDGEMENT: None

CONFLICT OF INTEREST:

The authors declare that they have no conflict of interest.

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Cite this article:

Padam Kumar M, L. Subha, Jayakar Thomas, Manoharan D, Manoharan K. A cross sectional study on the eye manifestations in subjects with psoriasis. *International Journal Of Advances In Case Reports*. 2017; 8(1):39-42.
DOI: <http://dx.doi.org/10.21276/ijacr.2017.4.1.10>



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