Commentary: A clinician should know about systemic psoriasis and eye

Psoriasis is an autoimmune disease commonly affecting the skin, nails and joints. The severity of psoriasis can be graded into mild and moderate-to-severe disease. Mild disease is defined as body surface area (BSA) ≤10 and psoriasis area and severity index (PASI) ≤10 and dermatology life quality index (DLQI) ≤10; moderate-to-severe psoriasis is defined as BSA >10 or PASI >10 and DLQI >10. In India, the prevalence of psoriasis varies from 0.44% to 2.8%. Though there are a limited number of studies worldwide, literature on the ocular manifestations in psoriasis from the Indian subcontinent is sparse. Recent literature has affirmed that dry eye and blepharitis are the most prevalent ocular manifestations.

The chronic systemic inflammation in psoriasis can cause ocular involvement. Dermatologists underestimate the ocular manifestations in psoriasis. Ocular manifestations in psoriasis can be varied and can affect any part of the eye. People with mild and severe psoriasis have an increased risk of uveitis.

In the pathogenesis, both psoriasis and uveitis are considered as paradigms of T-helper 1/T-helper 17 (Th1/Th17) inflammatory reactions. Th17 cells are the key mediators of ocular inflammatory disease. Cytokines such as TNF-α, IL-17, IL-23, and IL-6 play an important role in the pathogenesis of both psoriasis and uveitis. This partial, common inflammatory pathway behind these two diseases could explain the increased incidence of uveitis in psoriasis patients.

Though the ocular symptoms and signs are vague in patients with psoriasis, the dermatologist should maintain high index of suspicion. The symptoms are usually mild, which are not usually appreciated by the patient or can be overlooked by the dermatologist. Till date, ocular screening or evaluation is still not recommended in official recommendations and guidelines.
Chandran et al. and Erbagci et al. found that 67% and 67.4% of psoriasis patients had ocular manifestations, respectively.[7,8]

The ocular manifestations in psoriasis predominantly manifests in the anterior segment of the eye. Most common ocular manifestations in psoriasis are conjunctival hyperemia, dry eye and blepharitis. Scalp psoriasis is significantly associated with blepharitis [Table 1]. Corneal manifestations in psoriasis is secondary to conjunctival manifestations. Punctate epithelial keratitis is the most common corneal manifestation.

Dry eye is caused by the meibomian duct occlusion by psoriatic scales. Also, a low tear film break-up time is seen in patients with psoriasis. Erythema, edema, and psoriatic plaques around the eyes can cause madarosis, cicatricial ectropion, trichiasis, loss of lid tissue and obstructive type of meibomian gland dysfunction.[9] Patients with pustular psoriasis can have sterile pustules and lid swelling. Psoriatic plaques over lids can extend to involve conjunctiva.[10] Therefore, routine ocular evaluation is important in these subtypes of psoriasis patients which can prevent sight-threatening complications.[11]

Wanscher et al.[12] found that incidence of cataract among psoriasis patients did not exceed the normal population; hence, they concluded that routine eye examinations for cataract are not necessary for psoriasis patients.

Uveitis has been estimated to occur in 7%–20% of psoriasis.[7] It can be associated with various types of psoriasis, but it is higher in psoriasis vulgaris and psoriatic arthritis.[12] Due to the higher frequency of HLA B27 in psoriatic arthritis, the prevalence of uveitis in these patients is higher. The onset of uveitis in psoriasis was seen in younger male patients.[13]

What is unique is that the treatment of psoriasis can also cause ocular manifestation. Long-term steroid therapy, including topical steroid creams, can cause posterior subcapsular cataract.[17] PUVA or photochemotherapy is a type of ultraviolet radiation treatment (phototherapy) used for psoriasis. It is a safe and alternate treatment option for patients not responding to topical therapies alone [Table 2]. The ocular manifestation after PUVA therapy includes photophobia, conjunctivitis, keratitis and dry eyes. Dermatologists who employ PUVA therapy should be concerned about photokeratoconjunctivitis and dry eye syndrome.[18] There are case reports which have documented lens abnormalities following PUVA therapy, but this is not yet well established.[19]

In conclusion, there is a high prevalence of dry eye and blepharitis in patients with psoriasis.

Regardless of the risk factors associated with psoriasis, these patients should undergo regular ocular examinations to monitor for ocular manifestations that might otherwise progress asymptomatically. Also, ocular screening in psoriasis management protocols can help in the early diagnosis and improve outcomes.

| Table 1: Ocular manifestation in psoriasis |
|------------------------------------------|
| Ocular manifestations in psoriasis | Percentage[4,7] |
| Chronic non-specific conjunctivitis | 47% |
| Blepharitis | 27% |
| Dry eye | 46.6% |
| Punctate epithelial Keratitis | 9% |
| Cataract | 43.3% |
| Uveitis | 10% |

| Table 2: Association of psoriatic arthritis and uveitis |
|----------------------------------------------------------|
| Author | Design of the study | Results |
|-------|---------------------|--------|
| Chandran et al.[14] | Cross-sectional study. | 2 out of 100 psoriasis patients had uveitis. The severity of the skin disease may be an important independent risk factor for the development of uveitis. |
| Egeberg A et al.[15] | Cohort study of Danish population. | Patients with psoriatic skin disease, even in the absence of psoriatic arthritis, are at increased risk of uveitis. |
| Paiva ES et al.[16] | Retrospective study | 67% of the patients with psoriatic arthritis and uveitis were positive for the HLA-B27 |

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