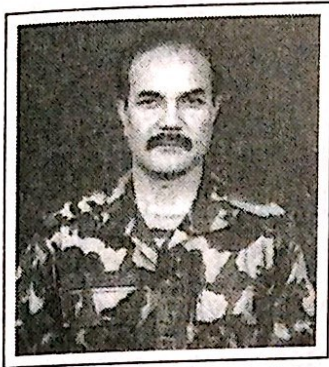


DEMODICOSIS

A CAUSE OF CHRONIC BLEPHARITIS



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Abstract

Presentation of a case of Chronic Blepharitis not responding to the standard line of therapy, further diagnosed as Demodectic Blepharitis which resolved in due course of time with appropriate management.

Case report

A 42-year-old lady of middle class socio-economic strata was referred by her family physician for further management of the Chronic Blepharitis which was not responding to the standard line of treatment with topical antibiotic drops and ointment for a period of over three months.

The patient complained of periodic itching and burning of her eyelids with scurf and crusting of the eyelashes accompanied by ocular irritation, redness and dryness. There was no history of Diabetes. A history of heavy makeup with eye shadow, mascara, eyeliner and kajal was obtained. She had stopped makeup as advised by her family physician a month ago.

On slit-lamp examination the lid margins

were hyperkeratinised with scaling and collarettes. Some tiny ulcers and bleeding points were also noted. Few of the lashes were matted with yellow crusts. Bilateral conjunctival hyperaemia was observed.

On closer slit-lamp examination under high power many dead and crumpled parasites were observed in the cellular debris of the lid margins. Many living parasites were also identified.

The diagnosis was established by examination of the epilated lashes and the identification of the nits and the Demodex folliculorum mites under the light microscope in the laboratory.

Once the diagnosis was made, alternate days scrubbing of the eyelid margins with 5% Betadine solution saturated cotton-wool applicator to clean the eyelashes and dislodge the conglomerates of mite infestation was instituted for about a week along with the picking up of the parasites with forceps. Tarsal massage and rubbing of the lid margins with a steroid and antibiotic ointment combination (Polymyxin B Sulphate, Neomycin Sulphate and Hydrocortisone) at night time for four weeks with frequent application of artificial tears. The

patient was also referred to the Dermatology clinic to exclude mite infestation of other parts of the body. The lids were the only areas involved. The patient was reviewed every alternate day for the first week and once a week for the next three weeks and then deemed asymptomatic. She was further cautioned that it was sometimes impossible to eradicate the mite completely and patients were prone to recurrence. She was advised to maintain strict lid hygiene with frequent scrubbing of the lids with diluted shampoo. After the four weeks of therapy she had come for follow-up at intervals of two months on three occasions. She was asymptomatic and doing well and finally advised to visit the clinic only if she had ocular symptoms. She has not been seen here for the last five months.

Discussion

Infestation of eyelashes and hair follicles, meibomian and sebaceous glands by the mite *Demodex* is known as Demodicosis. *Demodex* is the member of the class Arachnida which also includes spiders and scorpions. It is an obligatory ectoparasite. It was first discovered in cerumen by the anatomist Jacob Henle in 1841. Dermatologist Gustav Simon provided the first complete description of the parasite under the name *Acarus folliculorum* in 1842. In 1843 Zoologist Richard Owen gave the generic name *Demodex*.

Demodex folliculorum measures 0.3 to 0.4 mm in length and has an elongated striated abdomen giving it a worm like appearance.

Two congeneric species of *Demodex* may infest human eyelids. The *Demodex folliculorum* is found in the follicles of eyelashes and hair. *Demodex brevis* infests sebaceous and meibomian glands of the pilosebaceous complex. The life span of *Demodex folliculorum* is approximately 4-6 weeks. The heart shaped eggs hatch to produce hexaped larvae and eight legged adults develop via two nymphal stages. Follicle mites show a predilection for areas of high sebum production and they have been shown to contain lipase. They are numerous on the forehead, cheeks, nose and nasolabial folds. They are also found on the scalp, in the external ear, eyelashes, meibomian glands, upper chest, nipples, penis, mons veneris, buttocks and ectopic sebaceous glands in the buccal mucosa.

Demodex folliculorum assumes a head down position. The dorsal surface rests against the shaft of the eyelash, with the tip of the abdomen protruding from the follicular orifice and the trifid clawed feet facing the epithelial surface. They are readily identified by the characteristic annular inscriptions on the opisthosoma. Follicle mites are quadruped and motile and migrate from follicle to follicle. The parasite perforates the surface of the epithelial cells using its sharp chelicerae located in its head end and evacuates the cytoplasm using its well developed mouth parts. Most infested follicles contain two to six mites. Mites have been isolated from individuals of all ages except neonates. Transmission to infants occurs as a result of closed maternal contact. Mite nests are seen

in cases with heavy infestation. The mites do not burrow and are known to drop off after feeding. The mites produce pruritic allergic reactions through the salivary proteins deposited during feeding.

Demodex folliculorum implicated in the pathogenesis of Pityriasis folliculorum occurs in middle-age or elderly women who rarely wash their faces but use large quantities of make-up and cleansing agents. Some claim that moisturisers may enhance infection and *Demodex* infestation irritate or cause acne cosmetica. *Demodex* can be found in normal eyelash follicles. Demodectic Blepharitis is also associated with Diabetes Mellitus.

Demodectic Blepharitis is an uncommon condition in Nepal and most Ophthalmologists here may not have come across a single case.

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