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DISPELLING the Mystery of Demodexa

One of the most common yet often over-diagnosed facial rashes is rosacea, a chronic, relapsing, and potentially life-disruptive disorders of the facial skin that affects an estimated 14 million Americans. Many patients come to the clinic with redness on the checks, nose, chin or forehead that may come and go. The disease is more frequently diagnosed in women, but more severe symptoms tend to be seen in men.

Causes

Many rosacea patients commonly report facial burning, stinging, and itching. Certain rosacea suffers may also experience some swelling (edema) in the face that may become noticeable as early as the initial stage of the disease. It is also believed that in some patients this swelling process may contribute to the development of excess tissue on the nose (rhyinophyma), the condition that gave the late comedian W C Fields his trademark nose.

It's often thought that fair-skinned patients who tend to flush or blush easily are at greatest risk, while in fact facial redness from rosacea is simply more obvious in lighter skin. A normal blush or sunburn may appear the same, as can flushing from medication such as niacin or some anti-hypertension drugs. Flushing occurs when a large amount of blood flows through vessels quickly and the vessels expand under the skin to handle the flow. However, people with extensive sun damage, certain skin types, and even treated rosacea patients can still have a red face or blood vessel streaks, which is often misdiagnosed as active rosacea. This is because visible blood vessels (telangiectasia) not only develop with rosacea (or were likely always there) but there may also be some residual persistence of redness from the dilation of blood vessels during active disease. Unfortunately, these patients continue their medications unnecessarily, while more appropriate treatments could include camouflage make-up, sunscreens, a vascular laser, or intense pulse light (IPL) source. Unlike some conditions, there are no histological, seological, or other diagnostic test that are pathognomonic for rosacea.

A thorough examination of signs (appearance of bumps, or pimples) and symptoms (redness, flushing, and swelling, burning, itching or stinging), as well as a medical history of potential triggers, lead to the diagnosis. The National Rosacea Society suggests that the most common triggers of rosacea are sun exposure, emotional stress, hot or cold weather, wind, alcohol, spicy foods, heavy exercise, hot baths, heated beverages, and certain skin-care products. In other words, almost anything that is potentially stimulating is bad news for rosacea. Unfortunately for some, certain conditions such as lupus, seborrheic dermatitis, drug eruptions, and even rare forms of lymphoma can look just like rosacea and are often missed by the untrained eye or, worse, when the patients are diagnosing themselves.

Parasites

Rosacea is not an infections disease, and there is no evidence that it can be spread by contact with the skin or through inhaling airborne bacteria. However, there has long been a theory that parasites in the hair follicles or oil glands or on the face can stimulate inflammation by their activity or even just their presence. One such organism is the Demodex folliculorum mite, which studies have shown to be more prevalent and active in rosacea patients than in control groups. The mite is 0.3 mm long and is a part of the normal flora of most adults, but dermis, which creates an inflammatory response. Aside from rosacea, it has been implicated in folliculitis, dyschromias, pityriasis folliculorum, and inflammatory blephartitis (eyelids).

Although there is no standard assay for Demodex folliculorum or its smaller D. brevis, a controlled study revealed 10% of all skin biopsies and 12% of all hair follicles contained demodectic mites. This study also suggested that the prevalence of both species increased with a person's age, but D brevis had a lower prevalence. The face was most heavily infested by both species, but D brevis had a wider distribution on the body. Males were more heavily infested than females with both species, the difference being strongest for D brevis.

Early vascular and connective tissue changes probably crate a favorable setting for a growth of organism. This may represent an important co-factor, especially in papulopustular rosacea, in which a delayed hypersensitivity reaction is suspected, but it is not the cause of rosacea. On the other hand, clearing rosacea signs after oral tetracycline or sulfur ointment may not affect the resident Demodex population.

Treatments

The incidence of Demodex is age-related. About 25% were found in individuals up to 20 years old, 30% in individuals up to 50 years, 50% in those up to 80 years, and in all aged 90 or older. In healthy persons, one can find one or more Demodex in every tenth eyelash. This index rises with increasing age. In blepharitis or other external eye diseases, Demodex is found in about every sixth eyelash. Therapy of Chronic blepharitis in association with Demodex may include antibiotics, steroids, mercury 2% or lindane. Massage of lid margins is essential because local treatment is of no effect as long as the mite remains deep in the pilosebaceous complex.

According to a recent study published in the Journal of the American Academy of Dermatology, there is a high frequency of patients with rosacea who have concomitant demodicoses that contribute to their clinical manifestations. In this study, 10 dermatologists observed 3,213 patients who presented at least one to two diagnoses seen by this group, without a considerable bias of gender, season, age, or other contributing factor. The main observation was that all the patients were otherwise in good health. This same group suggested the use of treatment should include applying topical crotamiton 10% in the morning and crotamiton 10% plus benzyl benzoate 12% in the evening, two to three minutes after facial cleansing. This regimen provides a direct antimicrobial effect (acaricidal) against the mite.

As rosacea is characterized by flare-ups and remissions, and research has shown that long-term medical therapy significantly increases the rate of remission in rosacea patients, it behooves patients to use a maintenance regimen. In a six-month, multicenter clinical study, 42% of those not using medication had relapsed, compared with 23% of those who continued to apply a topical antibiotic. Therfore, treatment between flare-ups can prevent them. A rosacea facial care routine often starts with a gentle and refreshing abrasive, and it is spread with their fingertips. A soft pad or washcloth can also be used, but rough washcloth, loofahs, brushes or sponges should be avoided. The face should be rinsed with lukewarm water several times and blot-dried with a thick cotton towel. Typically, topical crotamiton cream is not part of the standard rosacea regimen prescribed by dermatologists, unless the actions of Demodex are considered. Yet in 1981, it was suggested that mites could survive high concentrations of metonidazole was not linked to the mite per the authors.

New Treatment

A new treatment available is seabuckthorn oil (FaceDoctor complexion soap). Its activity is targeted against the mite to reduce the inflammation under the skin, and therefore provides relief of the mechanisms that cause the rosacea complex of symptoms. The advantage that patients find with the soap is the elegance of the cleansing vehicle in otherwise sensitive skin, the presence of vitamin E and aloe vera, which provide additional healing properties, and other active ingredients such as Astagalus membraceous and Spirodela polyrhiza, useful yeast that augment the activity of the seabucthorn oil and make it effective and suffocating the parasite and eliminating the infestations.