Novel lymphoproliferative reaction to demodex infestation
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History
- A 43-year-old healthy man presented with a several month eruption of asymptomatic lesions on lips
- No new or changes in medication
- No topical products other than Burts Bees (used for yrs)
- No recent illness

Physical Examination
- Monomorphic smooth erythematous 3-4mm papules distributed over the vermilion border of upper and lower lips along the distribution of Fordyce spots
- No surface change, symmetric

Clinical Photos

Figure 1. Monomorphic smooth pink papules along vermilion border of upper and lower lips

Figure 2a. Left upper and lower lips with smooth pink papules. b. dermoscopic image of papule – bland pink/orange papule with uniform telangiectasia

Figure 3. Punch biopsy (H&E) showing dense and diffuse dermal infiltrate of lymphocytes small to medium in size extending to the biopsy base. Demodex mites are seen within the follicles.

Figure 4. Punch biopsy (H&E) showing dense and diffuse dermal infiltrate of lymphocytes small to medium in size extending to the biopsy base with a) CD3 staining b) CD4 staining c) CD20 staining and d) PDI staining.

Histopathology
- Dense and diffuse dermal infiltrate of small to medium size lymphocytes with staining was noted on H&E.
- Demodex mites were seen within the follicles.
- T-cell beta receptor gene rearrangement study revealed a dominant clonal population of T-cells.

Course and Therapy
- We favored the diagnosis of a pseudo-lymphomatoid demodicosis
- The patient was treated with intralesional kenalog, which led to improvement of the lesions
- Remaining lesions resolved with topical ivermectin cream twice daily

Discussion
- Demodex are ectoparasitic mites that have a predilection for sebum & often found in areas rich in sebaceous glands.1
- Demodicosis is characterized as a cutaneous infection with a high density of Demodex. This results in a variety of clinical manifestations such as ptyriasis folliculorum, rosacea, seborrheic dermatitis, and blepharitis.2,5
- While the pathogenesis of demodicosis and its role in certain skin diseases is not fully understood, immune dysregulation is thought to play a role.6
- The various ways in which demodex mites can alter the local host immune response has been documented in various dermatoses such as folliculocentric mimicking folliculotropogenic mycoses fungoides, acral, and perioral dermatitis.7–9
- Treatment options for demodicosis include topical or oral ivermectin, topical or oral metronidazole, permethrin, and tea tree oil.10
- Our case highlights a novel reaction pattern to Demodex infiltrating Fordyce spots, which should be considered in the differential diagnosis of erythematous papules in sebaceous rich areas.
- Pseudo-lymphomatoid demodicosis should be considered in the differential diagnosis of erythematous papules in sebaceous rich anatomic locations.

References