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A Robust Case of Allergic Contact Dermatitis to Propolis

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History

- A 58-year-old woman of Native American descent with a history of Sjogren's syndrome presented to dermatology clinic for facial dermatitis and cheilitis.
- She endorsed severe pain and pruritus in the affected area.
- The rash had been present for one year and was worsening despite use of high-potency topical steroids.
- She previously had temporary improvement with a course of prednisone, followed by relapse upon tapering.
- For moisturization, she was using bear grease and lip butter.

Examination

- Around her mouth there was a well-demarcated, symmetric, erythematous and lichenified scaly plaque.
- Upper and lower mucosal lips with confluent erythema and scaling.

Course

- Given the eczematous and symmetric morphology, as well as the patient's consistent use of her beeswax-containing bear grease and lip butter, a diagnosis of allergic contact dermatitis was favored.
- Tinea incognito was also included on the differential as a less likely possibility. This was ruled out with a negative fungal culture.
- The patient was advised to stop using all personal care products on her face and was referred for patch testing.
- At patch test clinic one month later, the dermatitis and cheilitis were completely resolved.
- Patches containing 80 standard allergens (North American 80 Comprehensive Series), as well as the patient's personal products were applied to the her back.
- Per patch testing protocol, the patient returned for two subsequent visits. At the patch reads both 2 days and 7 days later, she was noted to have +1 reactions to propolis and her bear grease and lip butter.
- The patient was advised to avoid propolis-containing products.

Clinical Photographs



Figure 1: Perioral erythematous scaly and lichenified plaque



Figures 3-4: +1 reactions at the sites of propolis (#33) and propolis-containing personal products (#81, 83, and 84)



Figure 2: Erythema and scale on upper and lower mucosal lips



Figures 5-6: Patient's bear grease and lip butter (#83 and 84 on patch testing, respectively)

7



Figure 7: Complete clearance with propolis avoidance

Discussion

- Allergic contact dermatitis (ACD) is a delayed-type (type 4) hypersensitivity reaction, occurring when an individual comes into cutaneous contact with a substance he or she has been sensitized to.
- Lesions of ACD are localized to the area of contact with the allergen.
- As with other eczematous processes, morphology depends on chronicity of exposure. Acute ACD typically presents with blistering, weeping, and edema, while chronic ACD has more of a scaly and lichenified appearance.
- A comprehensive history is critical when ACD is suspected.
- Confirmation of the diagnosis and identification of a specific trigger can be done with patch testing, a three-day process where multiple potential allergens are applied to the patient's back (day zero) then evaluated at days two and seven.
- Positive reactions are graded from +1 (non-vesicular erythema) to +3 (spreading bullae).
- ACD is treated with topical or systemic corticosteroids for clearance, along with patient education and diligent avoidance once the culprit allergen is identified.
- Propolis contains beeswax and is present in many readily available creams, ointments, waxes, lipsticks, and balms due to its soft, pliable texture and pleasant aroma.
- Propolis also has been reported to have anti-inflammatory and antimicrobial properties, and is present in various cosmeceutical, naturopathic, and homeopathic products.

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