

## DERMATITIS: A Case Study for Primary Care Providers

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Many new and experienced medical providers and students feel less than proficient at diagnosing and managing the vast array of dermatology problems faced in daily practice. It is one area of clinical practice where the more you see, the more you know.

### Case Study

It's Monday morning and the first student to be seen today is Maria. She is 7 years old and has been sent by the school nurse for evaluation of a rash and a decision on whether or not she should remain in school. Possible causes range from insect bites to smallpox, but most likely the problem will lie somewhere in the middle of that continuum. The differential diagnoses tick away in our heads as we begin our evaluation of Maria.

The rash is vesiculopapular, moderately erythematous and localized to the right forearm. There are excoriated areas indicating scratching due to itching. Maria reports that the rash started this weekend. Itches day and night. No other family members have a rash. She has never had a rash on her arms before. No one in the family has a history of asthma, allergies, or eczema. So it's doubtful Maria has atopic dermatitis since the three criteria to be met are: pruritis, typical morphology (dry, papular, scaling eruption with hypopigmentation) and distribution (flexor surfaces of wrists, antecubital and popliteal fossa), and chronic or recurring in nature.

Maria reports no new soaps, perfumes, lotions, creams, detergents or other topical agents being used at home. None of her friends have any itchy rashes either. You notice there are no burrows indicative of scabies. The rash is in a linear distribution indicating contact with some allergen. The investigation continues...

Maria's activities this weekend included pulling weeds around the fence and trees in her yard. The clinical presentation fits with Rhus Dermatitis, the contact dermatitis caused by the resin from poison oak, sumac or ivy. Management includes cleansing the area immediately after exposure with cool water. Soap is not used as it binds with the resin and spreads to other areas it comes in contact with. Over-the-counter hydrocortisone cream can be used sparingly to the affected areas three times a day for inflammation and pruritis. Because clothing may have resin on it and can cause dermatitis on areas contacted, all suspect clothing should be washed immediately. The family member handling the laundry should rinse their arms and hands well in cold water immediately. Severe Rhus dermatitis, especially around the eyes or face, may require systemic steroids.

Patient education is the key to prevention. Maria and her family need to learn what poison oak, ivy and sumac plants look like and where they grow. Picture books and web sites are great tools to use. They also need to be informed of wearing long sleeves, long pants, and gloves when pulling weeds and plants in the yards. These plants must be discarded in the trash, as burning them distributes the resin in the air. Maria must avoid contact with these plants since further exposures will result in more serious symptoms as with any repeated allergen contact.

Continuing education for clinicians is vital for accurate diagnosis and treatment. The following web-based resources related to pediatric dermatology will provide additional information and support.

## Dermatology Terminology

- *vesiculopapular* - clear vesicles and raised bumps together
- *erythematous* - reddish
- *excoriated* – severely scratched
- *atopic* – skin allergy
- *pruritis* – itching
- *morphology* – clinical picture
- papular– bumpy
- *hypopigmentation* – lighter skin coloring than normal
- *antecubital* – where the elbow bends
- *popliteal fossa* – area behind the knee that bends

## Dermatology Web-Based Resources

(There are numerous web-based resources on dermatology. Below are those that we consider to be valuable to school-based health care professionals).

*Merck Manual*, Sec.10, Ch. 111, Dermatitis [www.merck.com/pubs/mmanual/section10/chapter111/111b.htm](http://www.merck.com/pubs/mmanual/section10/chapter111/111b.htm)

Ask NOAH About: Dermatology (Skin Conditions)

[www.noah.health.org/english/illness/dermatology/derm.html](http://www.noah.health.org/english/illness/dermatology/derm.html)