

ACOP eJournal - Picture Quiz – Summer 2021

Phil.cdc.gov 4484 PIC



Five-year-old Caucasian, male presents with a vesicular, pruritic rash similar to the pic above. 24-48 hours previously he helped his grandfather move cattle from one pasture to another. He attended a swim party later that evening. No one from the swim party was sick or had rash. Child denies insect or bee sting. The rash is worse when child is hot or in tepid bath. The rash is generalized over body surface in exposed areas.

This issue's Picture Quiz represents a reaction to the Rhus genus of plants. Rhus dermatitis typically appears in areas of skin contact to Urushiol oil within 12-48 hours. It therefore represents a Type IV hypersensitivity reaction. Here, T-cells mediate cytokine release which recruit and activate macrophages. In contrast, Type I reaction is immediate, involves IgE release, and may lead to anaphylaxis. Type II reactions involve IgG and IgM antibodies directed toward specific antigens. Lastly, Type III reactions involve immune complexes with activation of complement. Complement is not activated in type IV delayed reactions.

This exercise is dedicated to the basic science professionals who taught us the "wax on/wax off" concepts underlying clinical medicine.

References:

1. Public Health Image Library (PHIL).cdc.gov image 4484
2. Shammash Bajwa, Reem Mohammed. NCBI.nlm.nih.gov, StatPearls Publishing LLC
3. Malak Abbas, Mohammed Moussa, Hassan Akel. May 4, 2021, NCBI.nlm.nih.gov, StatPearls Publishing LLC
4. Eric Martz. Poison Ivy: an Exaggerated Immune Response to Nothing Much. Bio.umass.edu.