When to Patch Test

Jennifer Chen, MD
Stanford Hospital and Clinics

What is most likely to be ACD?

- Pruritus
- Severe
- Starts out localized
- Can be intermittent or persistent
- Atopic dermatitis pts with unusual distributions
- Any dermatitis not responding to therapy

What is most likely to be ACD?

- Morphology: Epidermal (scaling, vesicles, lichenification, etc)
- Classically asymmetric; except with symmetric contact i.e. cosmetics, textile dermatitis
- Geographic appearance ("outside job")

What is most likely to be ACD?

- Distribution
  - Most likely are:
    - Head and neck
      (especially eyelids, lips)
    - Hands
    - Dorsal feet
    - Upper back
    - Anterior/posterior axillae
    - Anogenital
    - Photo-distribution

What is most likely to be ACD?

- Distribution
  - Nonspecific patterns are:
    - Scattered and widespread
    - Classic atopic dermatitis distribution
  - Remember: hands and scalp are relatively immune privileged and have a higher threshold of reactivity

Tips

- Only takes one exposure every 2-6 weeks to keep a rash going
- Reaction can be delayed a week or longer
- Can become sensitized to products used for years
- Changing products without patch testing is often unhelpful because many types of products are all made using similar ingredients
When to Patch Test

- Any dermatitis that is worsening in severity
- Dermatitis not improving with therapy or rebounding as soon as therapy is discontinued
- Dermatitis in high yield patterns
- Any chronic dermatitis not in a typical atopic dermatitis distribution
- Prior to initiating systemic immunosuppressant

ACD and Atopic Dermatitis (AD)

- Important to identify ACD: cause and treatment options often differ
- ACD is common in AD patients
  - In metaanalysis, a third of children w/ AD who were patch tested had at least one contact allergy
- ACD is likely underdiagnosed in AD patients
- Flexural dermatitis does not automatically equal AD
- Flares in AD pts are not all due to AD
- Failure to patch test may result in overlooking an important and potentially curable driver of disease

When to consider patch testing the AD pt

- Adult/adolescent onset of AD
- Therapy resistant or worsening dermatitis
- Atypical dermatitis distribution or pattern suggestive of ACD
- Recalcitrant hand eczema in the working population
- Prior to initiating systemic therapy

When to consider not patch testing

- Stable dermatitis in AD distribution
- Dermatitis affecting the patch test site
- Pregnancy/ lactation
- Current/recent exposure to immunosuppressive agents

Patch Testing on Systemic Medications

**Meds less likely to impact patch test results**

- Methotrexate (ideally < 0.25 mg/kg/wk)
- Prednisone < 10 mg/day
- Biologic therapy (TNF inhibitors, ustekinumab)
- Low dose cyclosporine (< 2 mg/kg)
- Azathioprine (dose dependent)
- Mycophenolate mofetil (dose dependent)
- Tacrolimus, systemic (dose dependent)
Treatments likely to impact patch test results:
- Phototherapy/prolonged UV exposure within the last 1-3 weeks
- Topical steroids at patch testing site w/in 3-7d
- Prednisone > 10 mg/day
- High dose cyclosporine (> 2 mg/kg)
- Intramuscular triamcinolone (avoid for 4 weeks)

Approach to Patch Testing Patients on Systemic Immunosuppressive Treatments:
- Avoid systemic immunosuppression for 5 half-lives of the drug in question (usually 1 month acceptable)
- When unavoidable, use the minimum dose required
- Stronger patch test reactions are more likely to still appear, although more weakly than they would have otherwise appeared
- Carefully consider weak positives/indeterminate reactions
- Consider repeat testing when off immunosuppression

Current Approach to Patch Testing On Dupilumab
- Dupilumab may have an allergen-dependent effect on ACD and patch test positivity that varies depending on severity of contact allergy
- ACD can be a cause of refractory regional dermatoses on dupilumab
- These pts may benefit from comprehensive patch testing and continuation of dupilumab in conjunction with allergen avoidance
- Ideally, patch test before starting dupilumab to rule ACD and address a potential cause of tx failure

Summary
- Patch testing is recommended for any chronic or treatment refractory dermatitis, prior to initiating systemic therapy, or for the prevention of dermatitis in select cases
- Patch testing should be considered for high yield patterns (i.e. head/neck, hands, feet, anogenital)
- Always optimize patient conditions: clear the back and minimize any immunosuppressants