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TOOLS FOR PRACTICE

PEER PATIENTS EXPERIENCE EVIDENCE RESEARCH

Itchy Beginnings: Can we calm infant eczema?

CLINICAL QUESTION

In infants under 2, how effective and safe are topical treatments for eczema?

BOTTOM LINE

In infants with mild–moderate eczema, topical pimecrolimus (with short-term topical corticosteroids for flares) and low- to-medium-potency corticosteroids appear similarly effective, with 50% having clear/mostly clear eczema at 3 weeks. Short-term harms appear to be similar or transient. No difference in withdrawals due to adverse events up to 5 years.

EVIDENCE

- Differences statistically significant unless reported.
- Topical corticosteroids:
  - No randomized controlled trials (RCTs) versus vehicle or placebo in this age group.
- Topical calcineurin inhibitors:
  - RCT (186 infants with mild-moderate eczema, 3-23 months of age), pimecrolimus 1% twice daily versus vehicle, at 6 weeks.[1]
    - "Complete/well-controlled eczema": 72% versus 27% (vehicle).
    - Skin infections and application site burning: no difference.
- Pimecrolimus versus corticosteroids:

- Pimecrolimus-funded open label RCT (2418 infants aged 3–12 months with mild-moderate eczema), comparing episodic pimecrolimus 1% versus low-potency (hydrocortisone 1%) or medium-potency (hydrocortisone butyrate 0.1%) corticosteroids.[2] Pimecrolimus group used topical steroids for flares. At 5 years:
  - Clear or mostly clear eczema: No difference (~50% at 3 weeks; ~90% at 5 years).
  - Median total drug exposure:
    - Pimecrolimus: 225 days with 7 days topical steroids.
    - Topical Steroids: 178 days.
  - No difference in withdrawals due to adverse events, growth, or infections (~1%). Authors did not originally report skin thinning. After multiple requests, reported skin atrophy in 1 on corticosteroids, versus 0 (pimecrolimus).[3]

CONTEXT

- Frequent bathing (1–2 times daily) may improve symptoms for 58% compared to 15% who bathe less frequently.[4] Guidelines recommend topical calcineurin inhibitors and corticosteroids during flares.[5]
- Systematic review (~3.4 million infants-adults) found no increased cancer risk with topical calcineurin inhibitors.[6]
- Review of systematic reviews (studies primarily 2-4 weeks duration) found no increased harms with intermittent topical corticosteroids for children and adults. Eleven observational studies (522 children) report ~4% transient, reversable, asymptomatic biochemical adrenal suppression.[7]
- Pimecrolimus approved in infants >3 months[8] and tacrolimus approved in children >15 years.[9]
- Cost (30 grams):[10,11] Pimecrolimus 1% ~$100, hydrocortisone 1% ~$10-$20.

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Authors have no conflicts of interest to declare.

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