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Study Guide: Pediatric Dermatology & Exanthems for Board Review

1. Morphological Definitions

- **Macule:** Flat lesion $< 1\text{ cm}$, without elevation or depression.
- **Patch:** Flat lesion $> 1\text{ cm}$, without elevation or depression.
- **Plaque:** Flat, elevated lesion, usually $> 1\text{ cm}$.
- **Papule:** Elevated, solid lesion $< 1\text{ cm}$.
- **Nodule:** Elevated, solid lesion $> 1\text{ cm}$.
- **Vesicle:** Elevated, fluid-filled lesion containing serous exudate, usually $< 1\text{ cm}$.
- **Bulla:** Elevated, fluid-filled epidermal lesion $> 1\text{ cm}$, often easily ruptured due to thin walls.
- **Pustule:** Elevated, pus-filled lesion $< 1\text{ cm}$.

2. High-Yield Dermatologic Conditions

- **Poison Ivy (Toxicodendron radicans):** Classic allergic contact dermatitis characterized by linear erythematous papules or vesicles appearing soon after exposure. Urushiol-contaminated items (e.g., sleeping bags) can cause unexpected winter exposures. Black spot poison ivy shows dark, resinous deposits on the skin. Treatment involves oral steroid tapers for extensive lesions to prevent rebound symptoms.
- **Henoch-Schönlein Purpura (HSP):** Classic presentation involves palpable purpura of the lower extremities or dependent areas, migratory polyarthritis, colicky abdominal pain, and renal disease. A transient maculopapular or urticarial rash may precede the non-blanching purpuric lesions ($3\text{--}10\text{ mm}$ size). Driven by IgA immune complex deposition causing necrotizing vasculitis.
- **Scabies (Sarcoptes scabiei):** Mite infection causing intense pruritus that worsens at night. Classic grey-white, threadlike, serpiginous burrows located on the webbing of fingers/toes, wrists, elbows, knees, axilla, and genitalia. Nodules on covered parts represent a granulomatous response to dead mite antigens and feces. Permethrin 5% cream is the preferred choice due to lower systemic absorption and toxicity compared to Lindane.
- **Atopic Dermatitis (AD):** Described as the "itch that rashes," a pruritic papular eruption with erythema. Lacks the scale seen in psoriasis or tinea. In skin of color (African-American, Asian, Hispanic), presentation often features follicular accentuation (follicular prominence on trunk/proximal extremities), prurigo-like nodules, and post-inflammatory hyper- or hypo-pigmentation.

- **Palmar & Plantar Infectious Exanthems:** While many conditions cause hand/foot rashes, the differential diagnosis for an *infectious* etiology involving the palms and soles is limited and high-yield: Enteroviruses (Coxsackievirus A16/Hand-Foot-Mouth, Enterovirus 71), Rocky Mountain Spotted Fever (RMSF), and Secondary Syphilis.

Flashcards

Front: What morphological term describes a fluid-filled lesion less than 1 cm in size, and how does it differ from a bulla?
Back: A vesicle is fluid-filled and $< 1\text{ cm}$. A bulla is also a fluid-filled epidermal lesion but is larger ($> 1\text{ cm}$) and possesses thin walls that rupture easily.
Front: What pathognomonic pattern is typically associated with the papules and vesicles of *Toxicodendron* (Poison Ivy) contact dermatitis?
Back: A linear distribution, which occurs as a result of the plant brushing against the skin or spreading the allergen via scratching.
Front: Why must oral steroid regimens utilized for extensive poison ivy dermatitis be tapered gradually over a long period?
Back: To prevent the recurrence of rebound symptoms or sudden flares of allergic contact dermatitis.
Front: What mechanism and immunoglobulin class drive the vasculitis seen in Henoch-Schönlein Purpura (HSP)?
Back: Deposition of IgA-producing antigen-antibody complexes locally in blood vessels, which activates pathways leading to necrotizing vasculitis.
Front: Where are scabies nodules typically found on a child's body, and what do they pathologically represent?
Back: Found on covered areas like the axilla, groin, and genitalia. They represent a granulomatous hypersensitivity response to dead mite antigens and fecal pellets (scybala).
Front: Which standard topical agent is preferred over Lindane for treating pediatric scabies due to lower systemic toxicity?
Back: Permethrin (5% cream), which features significantly lower systemic absorption compared to Lindane.
Front: What unique clinical manifestation of atopic dermatitis is particularly common on the trunk and proximal extremities in children of color?
Back: Follicular atopic dermatitis / follicular accentuation (prominence of the hair follicles rather than traditional widespread eczematous plaques).
Front: Name three distinct, high-yield infectious etiologies that characteristically present with a rash involving the palms of the hands and soles of the feet.
Back: 1. Enterovirus / Coxsackievirus (Hand-Foot-Mouth)
2. Rocky Mountain Spotted Fever (RMSF)
3. Secondary Syphilis

Board Certification Practice Quiz

A brief summary of the quiz you will create: *This practice quiz evaluates high-yield diagnostic*

patterns, dermatological definitions, and management plans regarding pediatric exanthems derived from clinical reviews on PediatricEducation.org.

PediatricEducation.org Rash Board Review
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Try again without interactive quiz

Best of luck studying for your pediatric board certification exam! You've got this!