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Transient Benign Neonatal Skin Findings

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The author reports no conflict of interest.

Condition	Incidence	Time Course: Appearance	Time Course: Resolution	Clinical Findings	Additional Tests	Treatment
Acne neonatorum	20% of neonates	Appears in the first few months of life	Could last up to 3 y of age	Comedones; inflamed papules and pustules; may lead to scarring	Stimulation of sebaceous glands by circulating androgens; if virilization is seen, could be a sign of androgen excess and further workup may be needed	Topical agents such as benzoyl peroxide or erythromycin gel; in severe cases oral antibiotics or isotretinoin may be required
Bohn nodules	Unknown	At birth	Resolve in first 3 mo of life	Smooth white papules or cysts found at the junction of the hard and soft palate and the buccal or labial aspect of the alveolar ridge	None	None
Epstein pearls	68%–85% of newborns	At birth	Resolve within first 2 wk of life	Small, white or yellow cystic vesicles (1–3 mm) seen on the median palatine raphe of the mouth	None	None
Erythema toxicum neonatorum	Approximately 50% of full-term newborns	Appears within 24–72 h after birth	Resolves within 2 wk	Erythematous macules with central vesicles or pustules; location: face, trunk, and proximal extremities; rarely on palms or soles	Giemsa stain; smear shows eosinophils	Self-limited; no treatment necessary

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Miliaria	Nearly all newborns can develop miliaria with overheating and occlusion	1–2 wk of life	Miliaria rubra resolves in 1–2 d after appearance; miliaria crystallina ruptures almost immediately	Miliaria rubra (prickly heat): fine, monomorphous, erythematous papules or pustules; may be accompanied with sensation of burning or itching; miliaria crystallina (sudamina): fine, monomorphous, clear vesicles with no inflammation; location: intertriginous areas, back, sites of occlusion	Wright stain may show only a few cells in miliaria crystallina and more plentiful lymphocytes in miliaria rubra; diagnosis is usually made by clinical presentation; pathogenesis is related to blockage of sweat glands, which occurs just below the stratum corneum in miliaria crystallina and slightly deeper in miliaria rubra	Usually self-limited; avoid overheating and occlusive clothing; avoid overapplying emollients; calamine lotion, cool compresses, and topical steroids
Neonatal cephalic pustulosis	20% of neonates and infants	Appears within first month of life	Resolves in a few months	Erythematous papules and pustules; absence of comedones is characteristic; location: forehead, cheeks, and chin; scalp may be involved	Giemsa stain; smear shows neutrophils with debris and yeast; *Malassezia* species implicated in the pathogenesis	Many cases resolve spontaneously; soap and water; avoid exogenous oils; in recalcitrant cases, topical ketoconazole and/or mild topical steroid may be prescribed
Seborrheic dermatitis (cradle cap)	Can affect up to 70% of infants and newborns	2–4 wk	By 1 y	Yellow greasy scales, erythema, and fissuring; location: seborrheic distribution of scalp, forehead, glabella, eyebrows, nasolabial folds, ears, and intertriginous areas	None; diagnosis is usually clinical	Baby shampoo and narrow-tooth comb or brush to help lift scales; if moderate to severe, may use topical steroids

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Condition	Incidence	Time Course: Appearance	Time Course: Resolution	Clinical Findings	Additional Tests	Treatment
Sucking blisters	Approximately 5% of neonates	Birth	Weeks	Tense noninflammatory bullae with sterile fluid; if the bullae rupture, neonates may only show erosions or calluses; location: on distal extremity (radial distal arm or dorsal hands/fingers)	None; diagnosis is usually clinical	Self-limited; no treatment necessary
Transient neonatal pustular melanosis	4.4% of black newborns; 0.6% of white newborns	Present at birth	Pustules resolve within days; pigmented macules may remain for months	Small, flaccid, superficial pustules with no surrounding erythema; may only see a collarette of scale when the pustules rupture in utero; heals with hyperpigmented macules; location: chin, neck, forehead, back, and buttocks most common; predisposition in neonates with darker-pigmented skin complexion	Giemsa stain; smear shows neutrophils; rare eosinophils and cellular debris	Self-limited; no treatment necessary

Practice Questions

1. **The parents of a 2-month-old infant present with their child. They are worried because the infant has "acne" that is not going away. Friends told them to try gentle cleansers and they have avoided using lotions or cream on her face. However, the bumps will not go away. On examination she has papules and pustules. Comedones cannot be identified. What are your next steps?**
   a. adapalene cream 0.1% every night at bedtime
   b. benzoyl peroxide cream 4%
   c. benzoyl peroxide wash 2.5%
   d. erythromycin gel 2%
   e. ketoconazole cream 2% twice daily

2. **While in the newborn nursery prior to discharge, the attending pediatrician notices a rash on a 2-day-old neonate who is otherwise completely healthy. The pediatrician consults a dermatologist for his/her opinion. The dermatologist sees erythematous macules with central pustules located predominately on the trunk and proximal extremities. A pustule is unroofed with a blade, the contents smeared on a glass slide, and a Giemsa stain is performed. What is the predominant cell type you would expect to see on histological examination?**
   a. eosinophils
   b. Langerhans cells
   c. lymphocytes
   d. neutrophils
   e. no cells are visualized

3. **Shortly after delivery, the pediatricians notice that the baby has numerous hyperpigmented macules on the back. No other primary lesions are seen. The neonate is otherwise normal in appearance and nontoxic appearing. A dermatologist is consulted for a recommendation for further workup or potential biopsy. The dermatologist examines the newborn. He is a well-appearing black boy with skin that is otherwise intact. A few pustules on the back are present that have a collarette of scale. The dermatologist reviews the mother's prenatal history and the review shows that she was screened for syphilis and had a negative screening test with no other history of infectious diseases. What is the most appropriate next step to confirm your suspicions?**
   a. do a swab of a pustule and send it for viral culture
   b. have his blood drawn and check for signs of neonatal herpes simplex virus infection
   c. perform a biopsy of a pustule
   d. perform a Giemsa stain on a smear of the pustule
   e. start treatment with permethrin

4. **Which intraoral cyst occurs on the alveolar ridge of a neonate?**
   a. Bohn nodule
   b. branchial cleft cyst
   c. Epstein pearls
   d. median raphe cyst
   e. palatal cysts of the newborn

5. **Miliaria rubra is associated with inflammation of the sweat glands in what portion of the skin?**
   a. basement membrane zone
   b. dermis
   c. dermoepidermal junction
   d. intraepidermal
   e. subcutis

Fact sheets and practice questions will be posted monthly.