

Symmetric red-purple papules in the diaper region



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A father brought his daughter, a 7-month-old healthy female, to the dermatology clinic with a chief complaint of bumps in her diaper area for 1 month. She was diagnosed with eczema and yeast in this area at a few months of life that were treated with topical nystatin and mupirocin. Her father denied the use of any topical steroids on the bumps.

Discussion: The physical examination revealed a well-appearing child with 4 discrete reddish-purple round papules that were symmetrically distributed on the convexities of the buttocks, ranging from 0.5 cm to 1.0 cm on a background of erythematous thin papules (Fig 1). The rest of her cutaneous examination was normal.

Question 1: What is the most likely diagnosis?

- A. Diaper candidiasis
- B. Granuloma gluteale infantum
- C. Juvenile xanthogranuloma
- D. Langerhans cell histiocytosis
- E. Leukemia cutis

A. Diaper candidiasis—Incorrect. Diaper candidiasis classically presents as erythematous plaques, commonly in the folds, with peripheral satellite lesions.

B. Granuloma gluteale infantum—Correct. The most likely diagnosis is granuloma gluteale infantum (GGI), which typically presents as asymptomatic, symmetric, red to purple, oval or round papules or nodules affecting the diaper area in infants.

C. Juvenile xanthogranuloma—Incorrect. Juvenile xanthogranuloma usually presents as a solitary or few discrete pink to yellow papules on the head and neck.

D. Langerhans cell histiocytosis—Incorrect. Langerhans cell histiocytosis typically presents with pink to yellow or skin-colored 1- to 2-mm eroded or hemorrhagic papules, pustules, or vesicles. Patients

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may also have a seborrheic dermatitis–like eruption involving the scalp and other flexural areas.

E. Leukemia cutis—Incorrect. Although leukemia cutis has a wide clinical presentation, the most characteristic skin findings are flesh-colored to red-brown papules, nodules, and plaques that may become purpuric. In addition, leukemia cutis typically presents concomitantly with or after a diagnosis of systemic leukemia and patients typically have other systemic symptoms.

Question 2: What is the most likely cause of this eruption?

- A.** Atypical mycobacterial infection
 - B.** Clonal proliferation of lymphocytes
 - C.** Fluorinated steroids
 - D.** Irritant diaper dermatitis
 - E.** Staphylococcal infection
- A.** Atypical mycobacterial infection—Incorrect. Despite having “granuloma” in its name, GGI is not caused by an infectious agent.
- B.** Clonal proliferation of lymphocytes—Incorrect. GGI does not represent a lymphoproliferative disorder.
- C.** Fluorinated steroids—Incorrect. The relationship between topical steroids, especially fluorinated formulations, and GGI is controversial.¹ There are cases reported in which GGI worsened when treated with topical steroids.² However, GGI is typically seen in patients with previous diaper dermatitis for which topical steroids may be used. This confounds their independent association with development of GGI.
- D.** Irritant diaper dermatitis—Correct. GGI is thought to be a sequela of primary diaper dermatitis, including irritant dermatitis and diaper candidiasis. Patients may present with GGI and primary diaper dermatitis concomitantly.
- E.** Staphylococcal infection—Incorrect. Staphylococcal species do not play a role in GGI.

Question 3: What is the most appropriate intervention at this time?

- A.** Barrier cream and avoidance of irritants

- B.** Clobetasol 0.05% cream twice a day for 2 weeks

- C.** Ketoconazole 2% cream daily for 1 week

- D.** Obtain a punch biopsy specimen

- E.** Tissue culture

A. Barrier cream and avoidance of irritants—Correct. The most appropriate intervention at this time is barrier cream and avoiding further irritation. GGI typically resolves spontaneously over weeks to months with conservative management aimed at preventing irritation in the region. Caretakers should also be counseled on frequent diaper changes.

B. Clobetasol 0.05% cream twice a day for 2 weeks—Incorrect. Caution should be used in applying class I topical steroids to the diaper area because of the high risk of adverse effects, especially in the setting of an occlusive diaper. In addition, because of the controversial relationship between topical steroids and GGI, their use is not recommended.

C. Ketoconazole 2% cream daily for 1 week—Incorrect. Ketoconazole 2% cream may be beneficial in treating candidal diaper dermatitis if it coexists with GGI, but that is not the primary process in our patient.

D. Obtain a punch biopsy specimen—Incorrect. Given the tendency for GGI to resolve spontaneously, holding off on obtaining a biopsy specimen is reasonable at this time in this infant. If the lesions fail to improve or the patient develops systemic symptoms, obtaining a biopsy specimen should be considered to rule out a more serious pathology.

E. Tissue culture—Incorrect. GGI is not an infectious process and therefore tissue culture would not be helpful.

REFERENCES

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