

REKALCITRANTNI ŽAKEOV EROZIVNI PELENSKI DERMATITIS REKALCITRANT JACQUET EROSIVE DIAPER DERMATITIS

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Sažetak

Dvomesečna novorođena beba doneta je sa teškim oblikom pelenskog dermatitisa koji se karakteriše višestrukim eritematoznim erozijama/ulceracijama sa podignutim ivicama. Lezije su počele u starosti od dve nedelje i bile su praćene površinskim infantilnim hemangiomom na desnoj zadnjici. Dermatitis je pripisan produženom trenju i pogoršan je čestim tečnim stolicama, neadekvatnom higijenom i produženim kontaktom sa fecesom/urinom. Početni tretman lokalnim kortikosteroidima/fuzidnom kiselinom/klotrimazolom/barijernim kremama/hipoalergenskim proizvodima i oralnim probioticima bio je neefikasan. Potpuno rešavanje problema postignuto je petodnevnom kursom kreme betametazon/gentamicin i produženom upotrebom spreja sa cink-oksikom 10%, termalnom vodom i prekidom uzimanja probiotika.

Ključne reči: pelenski osip; iritativni dermatitis; kontaktni dermatitis; ulkus; eritem; perineum; ishod lečenja

Abstract

A 2-month-old female neonate presented with a severe form of diaper dermatitis characterized by multiple punched-out erythematous erosions/ulcerations with raised borders. The lesions began at 2 weeks of age and were accompanied by a superficial infantile haemangioma on the right buttock. The dermatitis was attributed to prolonged friction and exacerbated by frequent loose stools, inadequate hygiene, and prolonged contact with faeces/urine. Initial treatment with low-potency topical corticosteroids/fusidic acid/clotrimazole/barrier creams/hypoallergenic products, and oral probiotics was ineffective. Complete resolution was achieved with a 5-day course of betamethasone/gentamycin cream and prolonged use of zinc oxide 10% spray, thermal water, and discontinuation of the probiotic.

Key words: Diaper Rash; Dermatitis, Irritant; Dermatitis, Contact; Ulcer; Erythema; Perineum; Treatment Outcome

Introduction

Jacquet erosive dermatitis (JED) represents an uncommon and severe manifestation of irritant diaper dermatitis, primarily precipitated by chronic friction and prolonged exposure to cutaneous irritants. Clinically, the condition is characterized by well-demarcated, erythematous, "punched-out" ulcerations and erosions within the perineal region [1].

We report a case of JED in an infant occurring subsequent to the application of a widely utilized commercial barrier cream. The onset of symptoms followed a reformulative shift in several of the product's active ingredients, suggesting a potential localized hy-

persensitivity or irritant reaction contributing to the clinical presentation.

Case Report

A female neonate, delivered at 38 weeks' gestation via spontaneous vaginal delivery, presented at two months of age with severe, persistent erosive dermatitis in the diaper distribution. Clinical examination revealed characteristic "punched-out" deep-set ulcers, painful erosions, and firm, erythematous-to-violaceous nodules localized to the buttocks, thighs, and genitalia (**Figures 1 and 2**). A diagnosis of JED was established, despite the routine, daily ad-



Figures 1 and 2. Erosive dermatitis in the diaper region, “punched-out” deep-set ulcers, painful erosions, and firm, erythematous-to-violaceous nodules localized to the buttocks, thighs, and genitalia

ministration of a standard over-the-counter barrier formulation. A concurrent superficial infantile hemangioma was noted on the right buttock. Initial therapeutic interventions –including low-potency topical corticosteroids, fusidic acid, clotrimazole, barrier creams, and oral probiotics – yielded no clinical improvement. The condition was attributed to the use of occlusive disposable diapers, which facilitated cutaneous hyperhydration and increased susceptibility to chemical irritants, specifically urinary ammonia and fecal digestive enzymes. Furthermore, continuous mechanical friction between the diaper and the skin during physical movement exacerbated the irritation, ultimately progressing to erosive dermatitis.

Upon discontinuation of all prior treatments, a therapeutic protocol was initiated consisting of topical sucralfate in an aqueous copper sulfate cream, administered four times daily. To mitigate irritation caused by expo-



Figure 3. Improvement of the erosions after therapy with topical sucralfate in an aqueous copper sulfate cream, commercial zinc oxide barrier cream between changes and betamethasone/gentamicin cream and presence of concurrent superficial infantile hemangioma was noted on the right buttock

sure to urine and fecal matter, a rigorous hygiene schedule was implemented, involving diaper changes at one-to-two-hour intervals. Supplemental care included the application of a commercial zinc oxide barrier cream between changes and betamethasone/gentamicin cream once daily for 5 days was added. Furthermore, the frequency of diaper-free periods was increased to minimize friction and alleviate moisture-induced dermatitis.

Substantial clinical recovery was observed during the 4–6-week review period, at which time a total clearance of erosive and pustular lesions was achieved (**Figure 3**).

Discussion

First described by Jacquet in 1905 to differentiate it from syphilitic manifestations, Jacquet’s erosive dermatitis is an extreme variant of irritant contact dermatitis [2]. Diaper dermatitis, specifically irritant diaper dermatitis (IDD), is a multifactorial condition arising from the synergistic effects of localized hyperthermia, prolonged moisture exposure, friction, and the chemical irritation of urea and fecal enzymes, often exacerbated by secondary microbial proliferation [3]. Although classically associated with the pediatric population, contemporary reports have increasingly

identified the condition in adults and older children [4-6]. The primary etiology involves chronic cutaneous maceration and irritation secondary to persistent urinary incontinence or diarrhea [4].

Jacquet's erosive dermatitis represents a rare and clinically distinct severe manifestation of IDD. This variant is characterized by well-demarcated, "punched-out" erosions or ulcerations featuring prominent crateriform borders [3]. The pathogenesis is frequently linked to chronic moisture and fecal contact, often secondary to inadequate hygiene practices, infrequent diaper replacement, or the use of non-breathable occlusive materials. Consequently, a higher prevalence is noted in pediatric populations suffering from chronic diarrhea or fecal incontinence, particularly those with underlying congenital conditions such as spina bifida or Hirschsprung disease [3].

The clinical diagnosis of JED is primarily suggested by the presence of an erosive, papulonodular eruption within the diaper (napkin) region. Given its morphology, several differential diagnoses must be systematically excluded, including Intertriginous candidiasis, condyloma acuminatum, and condylomata lata, acrodermatitis enteropathica and langerhans cell histiocytosis, granuloma gluteale infantum and perianal pseudoverrucous papules and nodules (PPPN) [6]. There is significant academic debate regarding the nosology of these conditions. Many authors suggest that JED, granuloma gluteale infantum, and PPPN represent a clinical continuum of severe irritant dermatitis rather than discrete pathological entities, advocating for a unified diagnostic classification [2].

The clinical management of Jacquet's erosive dermatitis aligns with the therapeutic protocols for IDD of varying etiologies, with a primary focus on moisture regulation [3]. Essential conservative measures include frequent diaper changes, the utilization of high-absorbency gel-core diapers, and the consistent application of topical barrier preparations.

While localized inflammation typically resolves with low-potency topical corticoster-

oids (and topical antifungal or antibacterial therapies in case of superimposed infection), severe presentations may require a more escalated approach. As illustrated in this case, systemic intervention involving oral antibiotics and corticosteroids may be clinically indicated for refractory or high-severity manifestations [3]. Consequently, it has been proposed that these conditions be collectively categorized under that broader diagnostic heading.

For our patient, we used topical sucralfate based on its documented efficacy across various mucocutaneous conditions, including napkin dermatitis, peristomal inflammation, thermal injuries, and chronic ulcerations [7].

The clinical efficacy of a topical regime including sucralfate in an aqueous cream base, zinc oxide barrier spray administered four times daily (qds) and betamethasone/gentamicin cream once daily for 5 days, was well demonstrated in our patient. Significant clinical improvement was observed within a four-to-six-week period, leading to the eventual resolution of the lesions. Holistic management, including the combination of topical treatments, integrated with conservative supportive care was paramount for the final outcome [5-8].

Conclusion

Jacquet erosive dermatitis represents a severe clinical variant of irritant diaper dermatitis, distinguished by the presence of discrete, punched-out erosions and ulcerations surrounded by raised erythematous borders. Holistic management is important and this report highlights the fact that not all barrier creams provide sufficient healing and protection and some commercial products might not be suitable for treatment and prevention of Jacquet erosive dermatitis.

Abbreviations

JED – Jacquet erosive dermatitis

IDD – irritant diaper dermatitis

PPPN – pseudoverrucous papules and nodules

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