ACUTE GENERALIZED EXANTHEMATOUS PUSTULOSIS INDUCED BY AMOXICILLIN–CLAVULANATE IN A CHILD: THE DIAGNOSTIC UTILITY OF ULTRAVIOLET DERMOSCOPY

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Abbreviation **AGEP** = acute generalized exanthematous pustulosis.

Case report. A six-year-old girl presented with a three-day history of intermittent fever, partially relieved by acetaminophen, and a two-day history of erythematous skin lesions. She also complained of sore throat and difficulty swallowing, resulting in reduced oral intake. There was no prior history of drug allergy or similar eruptions.

Cutaneous examination revealed diffuse erythema with a fine "sandpaper-like" texture involving the trunk and extremities, with flexural accentuation. Oral examination showed a strawberry tongue with prominent erythematous papillae and a whitish coating. Based on the clinical presentation, a provisional diagnosis of scarlet fever was considered.

Routine hematologic investigations and antistreptolysin O (ASO) titers were performed. The ASO titer was negative, and other hematologic parameters were within normal limits. Despite negative serology, given the clinical suspicion of scarlet fever, the child was started on amoxicillin–clavulanate syrup, along with acetaminophen and cetirizine.

Within 24 hours of initiating amoxicillin–clavulanate, a new eruption developed, predominantly localized to intertriginous areas. Dermatologic examination revealed multiple discrete, pinpoint, sterile, non-follicular pustules on an erythematous base bilaterally involving axillae and groin (Fig. 1). The lesions were associated with minimal pruritus, and there was no mucosal involvement or systemic deterioration.

Dermoscopy (DERMLITE DL5, 10×, polarized light) of the pustular lesions showed multiple round to oval whitish to yellowish structureless areas corresponding to superficial sterile pustules on an erythematous background (Fig. 2). Ultraviolet dermoscopy demonstrated numerous isolated to confluent yellow-green fluorescent pustules on a dark background (Fig. 3). The fluorescence was localized to superficial pustular contents, suggesting accumulation of neutrophil-rich inflammatory exudate and cellular degradation products within sterile intraepidermal pustules.

Based on the acute onset, characteristic morphology, flexural distribution, and the close temporal relationship with amoxicillin–clavulanate intake, a diagnosis of acute generalized exanthematous pustulosis was established. The suspected offending drug was immediately discontinued.

The patient was managed conservatively with symptomatic treatment. Fever resolved within 24 hours of drug withdrawal, and no new pustules developed. Over the following days, the lesions resolved completely with superficial desquamation, leaving no scarring or pigmentary sequelae. The child was subsequently treated with azithromycin for five days for the underlying illness and made a complete recovery.

Fig. 1

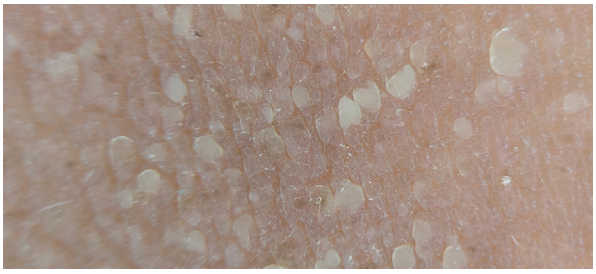

Fig. 2

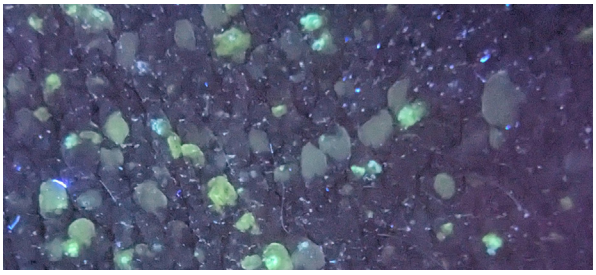

Fig. 3

Fig. 1, 2, 3: Acute generalized exanthematous pustulosis: pustular lesions involving the axillary folds (Fig. 1). Dermoscopic appearance of pustules without (Fig. 2) and with UV illumination (Fig. 3).

Discussion. Acute generalized exanthematous pustulosis (AGEP) is predominantly a drug-induced pustular eruption, with β-lactam antibiotics among the most frequently implicated agents. Pediatric presentations may be misleading, as early erythematous and systemic features can mimic severe infections, occasionally resulting in diagnostic delay or inappropriate continuation of the offending drug (1).

Amoxicillin–clavulanate is a well-documented trigger of AGEP, in both localized and generalized forms, with a characteristically short latency period following drug exposure (2, 3). In the present case, the scarlatiniform illness and AGEP occurred in close temporal succession. Rather than suggesting a pathogenic association, this chronology underscores how an initially infection-like presentation may lead to antibiotic administration, followed by the rapid development of a drug-induced pustular reaction.

Dermoscopy provided supportive diagnostic clues by demonstrating whitish to yellowish structureless areas corresponding to sterile pustules. Importantly, UV dermoscopy added further value by revealing yellow-green fluorescence confined to the pustular contents. This fluorescence likely reflects the presence of neutrophil-rich inflammatory exudate, cellular debris, and metabolic byproducts within superficial intraepidermal pustules.

Similar fluorescence patterns have been described in conditions characterized by purulent or keratinous material, although data specific to AGEP remain limited. While the exact biochemical basis of this fluorescence is still speculative, UV dermoscopy may serve as a rapid, noninvasive complementary tool to support the diagnosis of AGEP, particularly in pediatric patients in whom biopsy may be deferred. Further studies are needed to better characterize fluorescence patterns in AGEP and establish their diagnostic specificity.

Conclusions. This case of acute generalized exanthematous pustulosis is presented for its rarity and to highlight the ultraviolet dermoscopic features, which — if confirmed by further studies — may facilitate the diagnosis of this condition.

Conflicts of interest

The authors declare that they have no conflicts of interest.

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