

Acute generalized exanthematous pustulosis caused by ibuprofen—Diagnosis confirmed by patch testing

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Acute generalized exanthematous pustulosis (AGEP) is a rare, potentially severe drug reaction, characterized by acute onset of erythema with sterile pustules. It is well known that AGEP can be elicited by

antibiotics; however, several case reports have also reported ibuprofen as a culprit drug. To date, no results of patch testing in these patients have been reported.

CASE REPORT

A 34-year-old male presented to our outpatient clinic with a pustular rash on his trunk and groins. The patient reported intake of 2 over-the-counter products (Grippostad, containing paracetamol, ascorbic acid, and caffeine; and BoxaGrippal, containing ibuprofen and pseudoephedrine) because of a sore throat the day before. Laboratory tests showed an elevated C-reactive protein level and leukocytosis with neutrophilia. An infectious aetiology was excluded by chest X-ray, urinalysis, and swabs of the pustules, which remained negative. On the basis of these findings, "probable acute generalized exanthematous pustulosis (AGEP)" with a score of 9/15 (EuroSCAR)¹ was diagnosed. Systemic therapy with prednisolone 2 mg/kg led to regression of the rash, and the dose was tapered. Three months later, prick and patch testing for different non-steroidal anti-inflammatory drugs, including BoxaGrippal 10% and ibuprofen 10% (dissolved in 85% glycerol), were performed. Patch testing showed positive reactions (+) to BoxaGrippal and ibuprofen on day (D) 2, and stronger reactions with pustules (++) on D4. All other substances caused no reaction.

DISCUSSION

Well-known triggers of AGEP include antibiotic drugs such as β -lactams, clindamycin, and macrolides. Ibuprofen has only very rarely been described as a cause of AGEP.^{2–6} This is the first case report in which the diagnosis of AGEP caused by ibuprofen has been confirmed by positive patch test results, suggesting a type IV T cell-mediated pathogenesis. In the published case reports, the diagnosis was made clinically, histologically, or on the basis of a basophil activation test.^{2–6} The authors claimed that patch testing may trigger the original rash, but we found only a localized rash and pustulosis in the area of direct contact with ibuprofen. This is in line with a case series of 45 AGEP cases, in which a high percentage (50%–58%) of positive patch test findings and only 1 minor relapse after patch testing were described.⁷ In conclusion, patch testing appears to be useful and sensitive for identifying the culprit agent of AGEP, and

should therefore be considered also if ibuprofen is suspected as a culprit drug.

Conflict of interest

The authors declare no potential conflict of interests.

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