



First case report of acute generalized exanthematous pustulosis (AGEP) caused by mifepristone

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FIGURE 1 Numerous, pinhead-sized, nonfollicular, sterile pustules in the axilla, some confluent into pustule lakes

Mifepristone, an antiprogesterone medication, is commonly used in obstetrics/gynecology clinics for various purposes, including first-trimester abortion and dilatation of the cervix prior to intrauterine procedures. It is considered to be safe and effective. Acute generalized exanthematous pustulosis (AGEP) is a rare and severe cutaneous reaction characterized by the acute appearance of numerous non-follicular sterile pustules on an erythematous background, fever, and neutrophilia. AGEP is mostly drug-induced and different drugs are reported as a cause of AGEP but, to date, not mifepristone. We describe the first case of AGEP after administration of mifepristone.

CASE REPORT

A 28-year-old woman was referred because a 1.0-cm endometrial polyp to undergo hysteroscopy. On admission, vital signs and routine urinalysis, complete blood count, tests of the liver and kidney function, and electrocardiography showed normal findings. She had no known drug allergies and no history of psoriasis, and she had not taken any medication in the recent month. She ingested 100 mg of mifepristone for cervical ripening prior to hysteroscopy, and 6 hours later, she abruptly developed extensive erythema and pustules that were located predominantly in the flexural areas.

On examination, her temperature was 38.8°C, blood pressure 89/45 mm Hg, heart rate 97 beats per minute, and respiratory rate 18 breaths per minute. The patient had a generalized papular rash with nonfollicular pustules and pustule lakes in the folds (Figure 1). There was neither adenopathy nor mucous membrane involvement. By her own account, she had not been exposed to this drug before. Laboratory investigations revealed an increased number of leukocytes (21400/ μ L with 92% neutrophils), C-reactive protein was 94 mg/L (normal value <5 mg/L), procalcitonin was 0.26 ng/mL, and tests of the liver and kidney function were normal. The patient refused to undergo skin biopsies.

Due to the severity of the eruption, the patient was treated with intravenous dexamethasone 10 mg per day. After 3 days of treatment, the fever decreased and the pustules and erythema started

to resolve, followed by desquamation in the same distribution. Seven days later, dexamethasone was reduced and administered orally. Ten days later, the eruption had completely resolved with no recurrence and systemic corticosteroids were withdrawn.

DISCUSSION

Mifepristone is an antiprogesterone medication that is widely used and considered to be a safe drug. The only cutaneous side effects previously noted after administration of mifepristone were benign eruptions in 2% of patients, especially after long-term treatment.¹ A case of toxic epidermal necrolysis induced by mifepristone/gemeprost has been reported,² but it is uncertain whether it was induced by mifepristone or gemeprost. To our knowledge, no case of AGEP has been reported that was induced by mifepristone.

AGEP is generally attributed to drugs; aminopenicillins, pristinamycin, sulfonamides, quinolones, hydroxychloroquine, terbinafine, and diltiazem are the most frequent causative drugs.^{3–6} The incidence is low, with fewer than 10 cases per million inhabitants per year.⁷ An international case-control study estimated a mortality rate of around 4%.^{3,7} AGEP is defined by (a) several small, mostly nonfollicular pustules arising on a widespread edematous erythema; (b) typical histopathologic changes; (c) temperature >38°C; (d) blood neutrophil counts >7 × 10⁹/L; (e) acute evolution with spontaneous resolution of pustules in fewer than 15 days.⁴ In the present case, the patient met four of five criteria for AGEP. A limitation of this study is the lack of a biopsy. However, according to an AGEP validation score developed by the EuroSCAR group to confirm the diagnosis of AGEP,⁸ the patient scored 8, which indicated a definitive diagnosis of AGEP. Use of the Naranjo Adverse Drug Reaction Probability Scale resulted in a score of 7 for this event,⁹ indicating that mifepristone was the probable cause of AGEP.

AGEP has a self-limited course lasting up to 15 days and is treated mainly by withdrawing the offending drug. The necessity of steroids in the treatment of AGEP is still a matter of debate.⁸ In our case we used dexamethasone, as this might decrease the duration of hospitalization. In conclusion, hypersensitivity to mifepristone has rarely been reported; however, gynecologists should be aware that mifepristone could cause AGEP.

CONFLICTS OF INTEREST

None declared

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