Acute Generalized Exanthematous Pustulosis Induced by Lansoprazole

Sir,

Lansoprazole, like omeprazole, is a proton pump inhibitor usually used in the treatment of gastric ulcers. These molecules contain benzimidazole (1). Cutaneous reactions caused by these drugs are rare (1). They are classified as maculopapular exanthema, erythema multiforme, urticaria and bullous eruption. We describe the first case of acute generalized exanthematous pustulosis (AGEP) induced by lansoprazole.

CASE REPORT

A 66-year-old woman consulted us with AGEP and high fever (40°C). She developed a profuse pruritic erythematous rash on her legs, trunk and limbs and pustulosis on her legs and arms. Cutaneous eruption occurred 48 h after ingestion of lansoprazole. The laboratory findings showed an increase in the number of neutrophilic granulocytes ($12{,}000/mm^3$). The sedimentation rate was increased at 80 mm and CRP was 383 mg/l.

Bacteriological examination of pustulosis did not show any infection. A cutaneous biopsy showed a subcorneal pustule and in the upper dermis a dense accumulation of neutrophilic granulocytes. Four patch tests were performed with 5% and 20% omeprazole in distilled water and petrolatum. The patch tests were removed after 2 days and read at 2 and 4 days. Two patch tests with 5% and 20% omeprazole in petrolatum were positive (+ + = strong reaction) and were graded according to the recommendations of the ICDRG. Patch tests with 5% and 20% omeprazole in distilled water and petrolatum were negative in ten controls.

A cutaneous biopsy of positive patch tests at 5% and 20% in petrolatum showed papillary oedema and polymorphous perivascular infiltrates with histiocytes and lymphocytes. The epidermis was spongiotic.

DISCUSSION

The patient had AGEP. In 1980, Beylot et al. (2) described pustular eruptions with the following characteristics: acute onset after a bout of infection and/or drug ingestion in subjects with no history of psoriasis and evolution toward spontaneous healing after a single attack. Skin pathology examination revealed marked dermal vasculitis in addition to non-follicular subcorneal pustules.

High fever, with temperatures above 38°C, and increase in the number of neutrophilic granulocytes are generally observed.

In our case, a pathology study showed subcorneal pustules associated with dermal oedema, vasculitis and perivascular eosinophils. Roujeau et al. (3) analysed 63 cases of AGEP and showed that most cases seemed to be related to a drug reaction and hypersensitivity to mercury (4). Infections with enterovirus and contact dermatitis were also occasional causes. This patient did not have any infection, but she had ingested lansoprazole 2 days before the skin eruption. We confirmed this hypothesis with patch-testing. The patch test is suitable in the case of hypersensitivity reactions, as it is safe and relatively easy to perform. In our study, we could not obtain lansoprazole and thus used omeprazole, which is a similar molecule. The test substance used varied from 5% to 20% omeprasole in distilled water and petrolatum. Positive reactions were observed at 5% and 20% omeprazole in distilled water and petrolatum and at 5% and 20% omeprazole in petrolatum. Patch tests were negative in ten controls.

In this case, all criteria to establish the role of the drug were present: history and interval of drug ingestion, clinical aspect, positive patch test, appropriate patch test controls, and resolution when the drug was discontinued.

AGEP induced by lansoprazole has not previously been reported in the literature. Some authors have described several cases of AGEP induced by drugs. In these cases, patch tests were performed and were also positive. Thus patch-testing seems to be a good method to investigate AGEP induced by drugs. Kituchi et al. (5) described one case of AGEP induced by mexiletine. The substance used varied from 6.25% to 25% mexiletine in petrolatum. Patchtesting was doubtful or positive. Calkin & Maibach (6) also reported a case of AGEP induced by cimetidine. Patch tests with 1% and 10% cimetidine were also positive.

The only reliable method to investigate the aetiology of an allergic cutaneous drug reaction is, in most cases, reintroduction challenge with the suspected drug (6). Such provocation tests are potentially dangerous for the patient. Even if patch tests have not been shown to be particularly accurate, it is a suitable method to investigate AGEP induced by drugs.

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