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Letter to the editor

Etoposide-related acral erythema

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To the editor:

Chemotherapy-induced acral erythema (CIAE) has been associated with different cytotoxic agents since its first description by Burgdorf et al. in 1982 [2]. It is characterized by symmetric palmo-plantar involvement with dysesthesia, pain, erythema, blister formation, and subsequent desquamation. It occurs predominantly with the administration of cytotoxic drugs at high doses and on continuous-infusion schedules. Acral erythema has been reported mostly as a complication of 5-fluorouracil, cytarabine, and doxorubicin treatment but occasionally as a complication of cyclophosphamide, hydroxyurea, methotrexate, mitotane, and 6-mercaptopurine therapy [1]. Patients were receiving these drugs for diseases such as acute leukemia, non-Hodgkin's lymphoma, chronic myeloid leukemia, and colon, pancreas, and head and neck cancer. The mechanism of CIAE is unknown, but it seems to be a dose-dependent phenomenon, probably being related to cutaneous drug accumulation [3].

The purpose of this letter is to report on a patient with small-cell lung cancer who developed acral erythema during treatment with two different chemotherapy regimens, both of which included etoposide.

A 64-year-old man presented with superior vena cava syndrome and was diagnosed as having small-cell carcinoma of the lung (limited disease). He was treated with courses of etoposide given at 125 mg as a 1-h i.v. infusion for 3 days, doxorubicin given at 84 mg as an i.v. bolus on day 1, and methotrexate given at 50 mg as an i.v. bolus on day 1; courses were repeated every 3 weeks. At 24 h after the second course the patient noted swelling, pain, and erythema in both palms. No plantar symptom or sign was noted. A biopsy of the involved skin showed epidermal spongiosis and perivascular infiltration by lymphocytes. Pyridoxine treatment (300 mg/day) was started and the symptoms resolved after a desquamative phase.

A third and a fourth course of chemotherapy comprising the same drugs were given while the patient was taking prophylactic pyridoxine, and no cutaneous reaction occurred. After the fifth course, acral erythema reappeared and resolved within 2 weeks. Since the patient was receiving concurrent radiotherapy to the chest, the sixth course of chemotherapy was modified to include cyclophosphamide given at 1650 mg i.v. on day 1, vincristine given at 2 mg i.v. on day 1, and etoposide given at 125 mg as a 1-h i.v. infusion for 3 days. After this course of chemotherapy, transient CIAE reappeared. No further chemotherapy was given.

Our patient was treated with a combination of cytotoxic drugs, as were the other patients previously described [1–3], and this makes identification of the causative agent difficult. The observation that our patient developed acral erythema during treatment with two different chemotherapy regimens that only had in common the inclusion of etoposide suggests that the latter could have been the responsible drug. We have not found any report in the literature of the occurrence of CIAE after treatment with etoposide. The combination of etoposide, doxorubicin, and methotrexate has been commonly used to treat small-cell lung cancer patients at our institution since 1981, but we are not aware of any other case of CIAE. In conclusion, acral erythema may complicate etoposide-based chemotherapy in patients with small-cell lung cancer.

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