Successful treatment of palmar-planter erythrodysesthesia possibly due to temozolomide with dexamethasone

Sir,

Palmar-planter erythrodysesthesia (PPE) is a cutaneous toxicity of some chemotherapeutic agents such as 5-FU, doxorubicine and capecitabine.[1,2] Clinicians could also encounter this reaction in response to treatment with novel agents. Temozolomide is a new alkylating agent that has demonstrated promising activity in the treatment of primary or metastatic brain tumors.[3] Herein, we present a case of PPE possibly due to temozolomide therapy.

A 67-year-old man presented with headache caused by a large intracerebral frontal tumor. The tumor was totally resected and a diagnosis of glioblastoma multiforme was established. Following the surgery, he received radiation therapy. Three months later, locally tumor recurrence was detected and temozolomide was started at a dose of 200 mg/m² for five days every four weeks. A stable disease was achieved. Following the completion of the fifth cycle, the patient complained of a burning sensation at the lateral edges of hands and feet. This dysesthesia was followed by the development of symmetric erythema on the palms and soles [Figure 1]. The hands were more severely affected than feet. The painful and well-demarcated erythematous lesions on the palms and soles and perivascular lymphocytic infiltration. His metabolic status was normal and blood transfusion was not administered. Thus, the PPE was attributed to temozolomide. He was treated with intravenous dexamethasone at a dose of 32 mg/d for seven days. As the skin lesions resolved with brownish discoloration, this therapy was tapered over the following one week. The chemotherapy regimen of the patient had to be ceased because of the rapid progression in the clinical course.

In this patient, temozolomide-induced PPE might be caused by a cumulative toxic effect on the skin, since PPE occurred after fifth cycle of therapy. The patient received a combination of temozolomide and phenytoin, thus it is difficult to decide which drug or their combination is responsible for the skin lesions. However, as suggested by the patient’s history and available data in literature, it is most likely that the skin reaction was induced by temozolomide.

We treated our patient with intravenous dexamethasone and his symptoms and signs disappeared within one week. The prompt improvement of skin lesions as compared with the normal course of the disease (five to six weeks) confirmed the efficiency of dexamethasone therapy previously reported.[3]

In conclusion, chemotherapy-induced PPE is a fascinating clinical problem that can occur when using new and investigational agents as in this patient. We conclude that the patient is possibly a case of PPE to temozolomide. Therefore, we suggest that clinicians should be aware of the potential for PPE in patients receiving temozolomide.

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References

Figure 1: Symmetric erythema and edema on both palms