CORRESPONDENCE

Unexpected Right Phrenic Nerve Injury During 5-Fluorouracil Continuous Infusion Plus Cisplatin and Vinorelbine in Breast Cancer Patients

Regimens containing 5-fluorouracil as continuous infusion are an effective treatment for breast cancer, with an impressive low incidence of overall toxicity when compared with bolus regimens (1,2).

From March 1998 up to March 1999, a novel regimen that combined 5-fluorouracil in continuous infusion at a dose of 200 mg/m² per day, cisplatin at a dose of 60 mg/m² given intravenously on day 1, and vinorelbine at 20 mg/dose given intravenously on days 1 and 3 (ViFUP regimen) was administered every 3 weeks to 186 patients with metastatic (n = 100) or locally advanced (n = 86) breast cancer, as a palliative or neoadjuvant treatment.

Continuous monitoring of toxic effects led to the observation of an unexpected side effect. A right diaphragmatic supranelevation could be a late complication of an in-dwelling central venous catheter (3). However, previous trials (2,4) with other infusional regimens containing 5-fluorouracil and cisplatin, but not vinorelbine, do not report such a phenomenon.

Although the pathogenesis of this event is still unknown, we might hypothesize that vinorelbine, as previously reported in vitro (5), could have damaged the endothelial barrier permeability near the catheter tip, favoring the occurrence of the right phrenic nerve injury due to a chemical vasa nervorum vasculitis. Nevertheless, a critical role of 5-fluorouracil cannot be ruled out.

As a consequence, we strongly recommend careful monitoring of any shoulder pain occurring in the patient during continuous infusion of 5-fluorouracil, platinum, or vinca alkaloids.

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