

LETTER TO THE EDITORS

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Possible efficacy of allopurinol vaginal washings in the treatment of chemotherapy-induced vaginitis

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Sir,

Mucositis is an extremely common side effect of antimetabolite-containing chemotherapy regimens, which can greatly affect patients' quality of life. Even though the oral cavity and all the remaining gastrointestinal tract are clearly the most common localizations of mucosal injury due to anticancer drugs such as 5-fluorouracil (5-FU) and methotrexate (MTX), the genital tract, especially in women, may also be involved in mucositis. Indeed, vaginitis is frequently observed in women receiving systemic chemotherapy [1].

Treatment for chemotherapy-induced mucositis mostly relies on the management of mucositis-induced symptoms and includes the use of cryotherapy, antifungal drugs, lenitive washings and anti-inflammatory drugs, and even narcotics in mucositis in the transplantation setting [2].

We have previously demonstrated the efficacy of allopurinol mouthwashes in reducing 5-FU- and low-dose MTX-induced stomatitis, probably thanks to the well-known free-radical-scavenging properties of this drug [3, 4]. Indeed, free-radical generation seems to maintain the mucosal damage after the first direct action of anticancer drug metabolites [5].

We recently observed a 66-year-old patient with advanced breast cancer, who developed severe (WHO grade III) vaginitis after receiving the first cycle of a third-line chemotherapy regimen including both 5-FU and MTX. Fresh microscopic examination of a vaginal smear

and vaginal cultures proved that these were negative for both bacterial and fungal infection; moreover, the concomitant appearance of stomatitis, the absence of a clinical history of recurrent vaginitis, and the temporal relationship with the administration of the two antimetabolites allowed us to confirm the chemotherapy-induced nature of the inflammation.

Treatment with allopurinol vaginal washings yielded early reduction of the symptoms and complete vaginitis resolution by day 3 after all commonly used therapeutic modalities had failed.

The suspension used for the washings consisted of allopurinol at 3 mg/ml in sterile water. It was prepared by accurate dissolution of 300 mg allopurinol granular dispersion (Zyloric, Wellcome Italia, Pomezia, Italy) in 100 ml water; washings were performed four times a day until complete symptom resolution. Allopurinol vaginal washings alone were started as soon as the patient began complaining of vaginal irritation, after the second chemotherapy cycle, and resulted in the rapid and complete disappearance of all signs and symptoms of vaginal inflammation.

This second case of clinical success seems to exclude that the complete resolution of vaginitis after the first chemotherapy cycle could have been due to a late effect of the other modalities initially used or to a spontaneous regression of this chemotherapy-related side effect. However, only an adequate prospective, placebo-controlled, randomized clinical trial would definitely confirm allopurinol's efficacy in the treatment of chemotherapy-induced vaginitis.

References

1. McAtee N, Brooks C, Dela-Rosa T (1995) Cryotherapy reduces fluorouracil-related side effects. *Oncol Nurs Forum* 22: 1287–1288
2. Loprinzi CL, Foote RL, Michalak J (1995) Alleviation of cytotoxic therapy-induced normal tissue damage. *Semin Oncol* 22 [Suppl 3]: 95–97

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3. Porta C, Moroni M, Nastasi G (1994) Allopurinol mouthwashes in the treatment of 5-fluorouracil-induced stomatitis. *Am J Clin Oncol* 17: 246–247
4. Montecucco CM, Caporali R, Rossi S, Porta C (1994) Allopurinol mouthwashes in methotrexate-induced stomatitis. *Arthritis Rheum* 37: 777–778
5. Bhattathiri VN, Sreelekha TT, Sebastian P, Remani P, Chandini R, Vijayakumar T, Nair MK (1994) Influence of plasma GSH level on acute radiation mucositis of the oral cavity. *Int J Radiat Oncol Biol Phys* 29: 383–386