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Letter

Cross-Sectional Study of Temozolomide-Induced Chemotherapy-Induced Nausea and Vomiting in Patients with Glioma

Madam — Prophylactic anti-emetic regimens have been designed to prevent chemotherapy-induced nausea and vomiting (CINV). CINV research is predominantly carried out on patients receiving intravenous chemotherapy, largely excluding patients with central nervous system tumours [1,2]. Hence, we carried out an audit of 80 adult glioma patients treated with adjuvant temozolomide (TMZ) to study the incidence of CINV associated with TMZ.

TMZ (150–200 mg/m^2 days 1–5) was administered with ondansetron (8 mg BD days 1–5) [1]. CINV was defined as nausea or vomiting occurring within 120 h of the last dose of TMZ. Factors impacting CINV were sought using binary logistic regression analysis. The median age was 40 years (range 24–65 years) with 47 men (58.8%) and 33 women (41.2%). The median number of cycles of TMZ was seven (range one to 20). Concurrent dexamethasone was received by four patients for raised intracranial pressure. The incidence of CINV was 23.7% (n = 19; 95% confidence interval 15.7–35.3%) and vomiting was 7.5% (n = 6, 95% confidence interval 3.2–15.8%). Grade 2 or above nausea and vomiting were seen in 16 patients (20.1%, 95% confidence interval 12.7–30.2%) and four patients (5.1%, 95% confidence interval 1.6–12.7%), respectively. None of the factors tested including age (P = 0.98), gender (P = 0.95) and cycle number of TMZ (P = 0.21) were predictive for the development of CINV.

The American Society of Clinical Oncology anti-emetic guidelines suggest prophylaxis with 5HT3 antagonists with TMZ, which seems insufficient [1]. In a study reported from Japan by Matsuda *et al.* [3], the rates of grade 2 and above nausea and vomiting were 89% and 39%, respectively, with TMZ. This audit, together with the current report, points out an important lacuna in the current practice of administration of anti-emetic supportive medications with TMZ. We are at present planning a study to explore the most optimal anti-emetic regimen with adjuvant TMZ.

Conflicts of interest

None declared.

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References

[1] Hesketh PJ, Bohlke K, Lyman GH, Basch E, Chesney M, Clark-Snow RA, *et al.* Antiemetics: American Society of Clinical Oncology focused guideline update. *J Clin Oncol* 2016;34:381–386. https://doi.org/10.1200/JCO.2015.64.3635.

[2] Patil VM, Noronha V, Joshi A, Ramaswamy A, Gupta S, Sahu A, *et al.* Adherence to and implementation of ASCO antiemetic guidelines in routine practice in a tertiary cancer center in India. *J Oncol Pract* 2017;13:e574–e581.

[3] Matsuda M, Yamamoto T, Ishikawa E, Nakai K, Akutsu H, Onuma K, *et al.* Profile analysis of chemotherapy-induced nausea and vomiting in patients treated with concomitant temozolomide and radiotherapy: results of a prospective study. *Neurol Med Chir* 2015;55:749–755.

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