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LETTER TO THE EDITOR

Toxicity and compliance with a chemoradiotherapy schedule for advanced nasopharyngeal carcinoma: A single institution experience using the Intergroup 0099 study regimen

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To the Editor:

As the results of the Intergroup 0099 study showed a marked improvement in survival using concurrent chemoradiotherapy (c-CRT) and adjuvant chemotherapy (a-CT) in patients with locally advanced nasopharyngeal carcinoma (NPC), several groups now recommend this combined treatment as the standard form of care. Since November 1998, we have treated 23 patients with non-metastatic advanced NPC with the schedule used in the Intergroup 0099 trial. The patients and treatment characteristics are summarized in Table I.

Here we describe a high rate of acute toxicity experienced at our institution using the regimen. Mucositis, hematological toxicity, and emesis were the main limiting adverse effects compromising total regimen compliance. In our series, only 4 (17%) out of 23 patients completed the 6 chemotherapy cycles as planned, 39% completed the concurrent chemotherapy, and 39% received three courses of a-CT, in contrast with 63% and 55% reported in the Intergroup study, respectively. These differences are explained by the higher incidence of grade 3–4 mucositis and leukopenia presented in our group during the c-CRT compared with that reported in the Intergroup study (87% and 43% vs. 37% and 29% respectively). Other authors have also reported low compliance and a higher toxicity incidence with this regimen. Bahl et al. [2] treated 75 patients with locally advanced NPC, and found that only 43% of the patients received three cycles during c-CRT and 61% received all three cycles of a-CT, with only 33% receiving the intended dose intensity without modifications. Lee et al. [3] reported on 348 patients randomized to radiotherapy alone or chemoradiotherapy and found a higher incidence of acute toxicity in the chemoradiotherapy arm, with fatal toxicities ocurring in 2 patients.

Despite the low compliance, the 2.8-year progression-free survival and overall survival obtained in our group (78% and 84%, respectively) are comparable to that obtained at 3 years in the chemoradiotherapy arm of the Intergroup study (69% and 78%, respectively). This could be related to a higher percentage (61%) of WHO type III histology in our series compared with 41% in the Intergroup study. Moreover, all 23 patients received at least 2 cycles during the c-CRT phase, and there is evidence that only the addition of concurrent chemotherapy to radiotherapy offers a small but significant effect on overall survival, and no survival benefit has been consistently demonstrated for the a-CT [4–6].

In conclusion, we recommend careful and judicious selection of the chemotherapy schedule to avoid extreme toxicity and jeopardizing compliance with the complete treatment plan. Other chemoradiotherapy schedules using cisplatin-based c-CRT have been tested in randomized trials and are available with a better toxicity profile [7,8]. In our

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Table I. Characteristics of patients and treatment.

				Concurrent chemotherapy		Adjuvant chemotherapy		
Patient	Stage	WHO histology	Radiation (Gy)	No. of cycles	Grade 3–4 toxicity	No. of cycles	Grade 3–4 toxicity	Status
1	T3N1	III	72	3	0	0	–	DFD
2	T4N0	III	68.4	3	0	3	0	NED
3	T1N2	III	70.2	2	Mucositis, leukopenia, skin reaction	0	–	NED
4	T4N2	III	70.2	3	Mucositis, emesis	2	Leukopenia	NED
5	T3N1	II	66.6	2	Mucositis, leukopenia	2	Leukopenia, thrombocytopenia	DFD
6	T3N2	III	70.2	2	Mucositis, leukopenia, skin reaction	0	–	NED
7	T3N1	III	70.2	3	Febrile neutropenia	0	–	NED
8	T4N1	III	68.4	2	Mucositis	3	0	NED
9	T3N2	I	70.2	2	Mucositis, emesis	3	0	NED
10	T4N0	I	70.2	2	Mucositis, leukopenia, skin reaction	0	–	NED
11	T4N0	II	68.4	3	Mucositis, skin reaction	2	Leukopenia, renal failure	NED
12	T4N1	I	68.4	3	Mucositis	3	Leukopenia	NED
13	T1N2	I	70.2	2	Mucositis, leukopenia	3	–	NED
14	T1N2	II	70.2	2	Mucositis, emesis	0	–	NED
15	T3N2	III	68.4	2	Mucositis, leukopenia	3	Leukopenia	LR
16	T4N0	III	68.4	3	Mucositis	3	0	NED
17	T3N2	III	70.2	3	Mucositis	3	Leukopenia	NED
18	T1N2	III	70.2	2	Mucositis, leukopenia, emesis	0	–	NED
19	T3N3	III	68.4	2	Mucositis, leukopenia, thrombocytopenia	0	–	NED
20	T4N1	II	70.2	3	Leukopenia, renal failure	0	–	DFD
21	T3N2	III	72	2	Mucositis, renal failure, emesis	0	–	NED
22	T3N1	III	70.2	2	Mucositis, leukopenia, thrombocytopenia	1	Leukopenia, renal failure, febrile neutropenia	NED
23	T2N2	II	68.4	2	Mucositis	3	Leukopenia	NED

Abbreviations: NED = no evidence of disease at last follow-up, DFD = dead from disease, L = local recurrence.

experience, the Intergroup study 0099 regimen has a considerable toxicity that limits its compliance. A change in the locally advanced NPC treatment policy will be made at our institution.

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