Intensity-Modulated Radiation Therapy (IMRT) in nasopharynx tumors: long term results.

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BACKGROUND

Feasibility study of moderately accelerated intensity-modulated radiotherapy plus concurrent weekly cisplatin after induction chemotherapy in locally advanced head-and neck cancer.

Morganti AG[1], Mignogna S, Deodato F, Massaccesi M, Cilla S, Calista F, Serafini G, Digesú C, Macchia G, Picardi V, Caravatta L, Di Lullo L, Giglio G, Sallustio G, Piermattei A, Cellini N, Valentini V.

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Abstract

PURPOSE: To evaluate the feasibility and efficacy of moderately accelerated intensity-modulated radiation therapy (IMRT) along with weekly cisplatin, after induction chemotherapy, in patients with locally advanced unresectable head and neck cancer (HNC).

METHODS AND MATERIALS: Patients with Stage III or IV locally advanced HNC, without progressive disease after three courses of induction chemotherapy, received concurrent chemo-IMRT (weekly cisplatin 30 mg/m(2) plus simultaneous integrated boost IMRT). A total of 67.5 Gy in 30 fractions were delivered to primary tumor and involved nodes, 60 Gy in 30 fractions to high-risk nodal areas, and 55.5 Gy in 30 fractions to low-risk nodal areas.

RESULTS: In all, 36 patients (median age, 56 years) with International Union Against Cancer (UICC) Stage III (n = 5) and IV (n = 31) were included. Of the 36 patients, 17 had received CF (cisplatin and 5-fluorouracil (CF) and 19 had received docetaxel cisplatin and 5-fluorouracil (DCF). During concurrent chemoradiation, 11 of 36 patients (30.5%) experienced Grade III mucositis (CF, 47%; DCF, 15%; $p < 0.04$). Grade III pharyngeal-esophageal toxicity was observed in 5 of 19 patients (26.3%; CF, 0.0%; DCF, 26.3%; $p = 0.02$). Two patients died of complications (5.5%). After chemoradiation, the complete response rate was 63.8%. Two-year local control was 88.7%. Two-year progression free survival and overall survival were 74.5% and 60.9%, respectively.

CONCLUSIONS: In our experience, a moderately accelerated chemo-IMRT was feasible after induction chemotherapy. However, a noteworthy early death rate of 5.5% was observed. Intensive supportive care strategies should be defined to better manage radiation-induced toxic effects. Longer follow-up is required to determine the incidence of late radiation toxicities and tumor control rates.

The aim of the study was to report the long-term clinical outcomes of nasopharynx cancer patients treated with cisplatin based RCT.

METHODS AND MATERIALS

Pts with biopsy-proven nasopharynx cancer previously untreated

THERAPY	RCT NACT (CF/DCF) - RCT
RT TECHNIQUE	IMRT/SIB VMAT/SIB
DOSES	67.5-70.5 Gy/30 fr 60 Gy/30 fr 55.5 Gy/30 fr

RESULTS

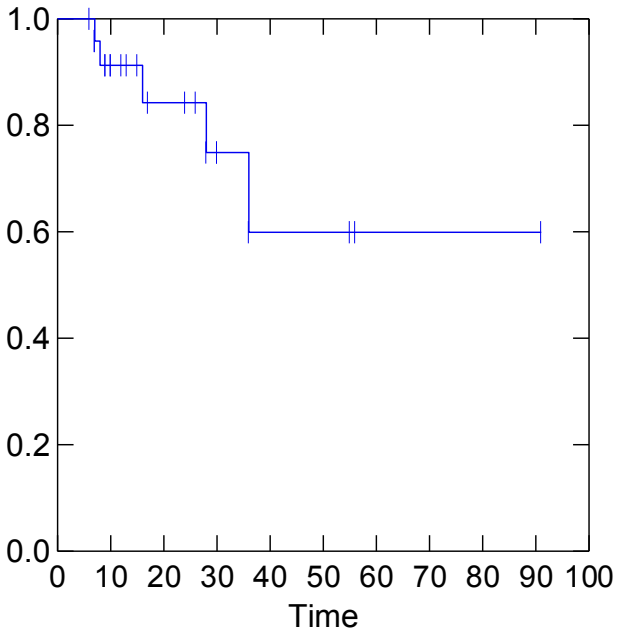
SEX	MALE	19 (73 %)
	FEMALE	7 (27 %)
AGE		55 yrs (30-79)
STAGE	I	0 (0 %)
	II	3 (11.5 %)
	III	8 (30.8 %)
	IV	15 (57.7 %)
THERAPY	RCT	5 (19 %)
	NACT (CF/DCF)–RCT	21 (81 %)
RT TECHNIQUE	IMRT/SIB	15 (57.7 %)
	VMAT/SIB	11 (42.3 %)

RESULTS

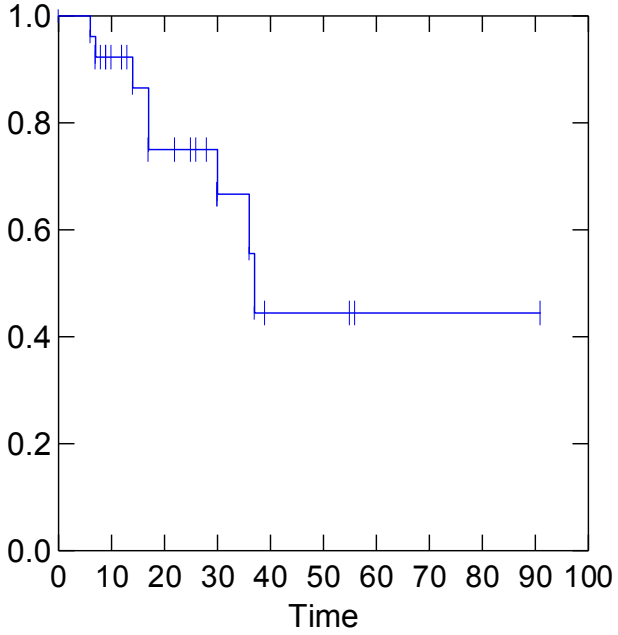
LC 2 yrs: 84 %
5 yrs: 60 %

OS 2 yrs: 75 %
5 yrs: 44 %

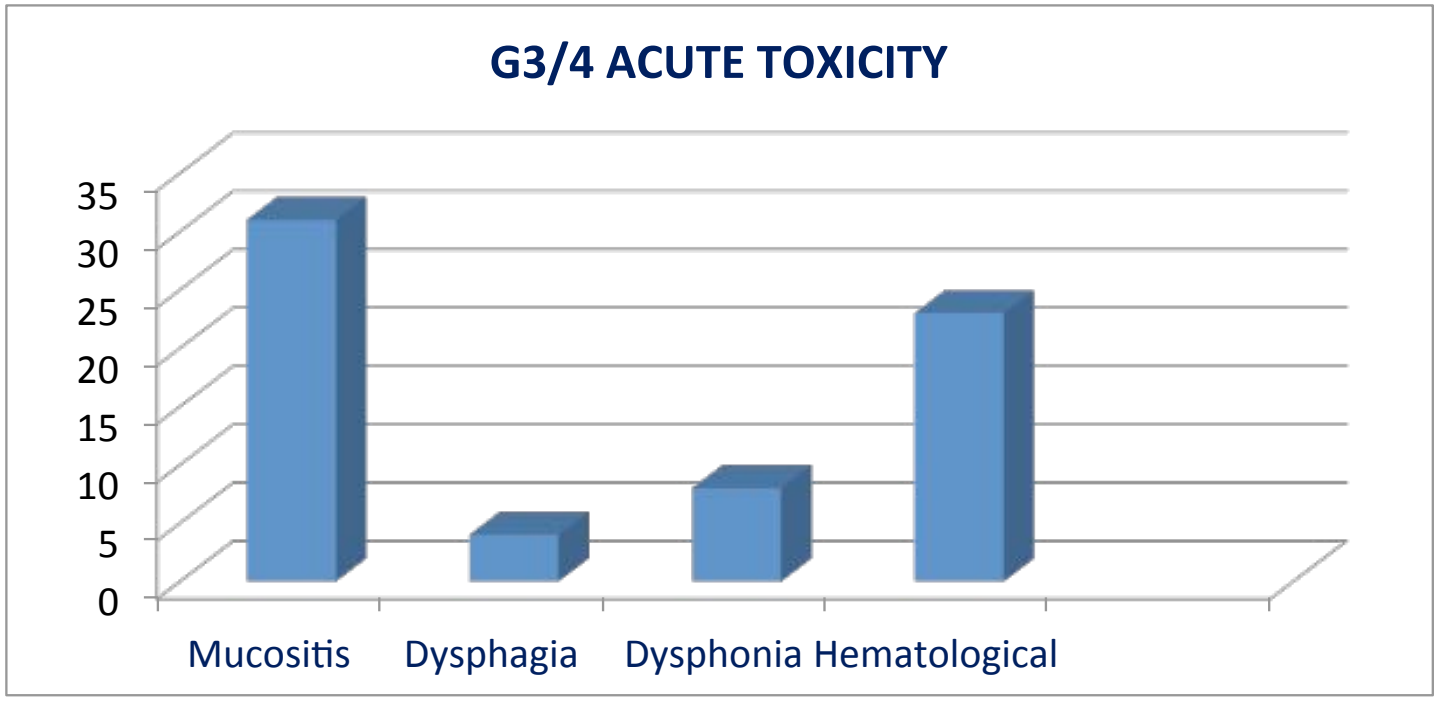
LOCAL CONTROL



OVERALL SURVIVAL



RESULTS



No G3/4 late toxicity was recorded.

CONCLUSION

In our experience, a moderately accelerated concurrent RTC, even after induction chemotherapy, is feasible and well tolerated.

Taking into account the preponderance of locally advanced tumors, LC and OS are encouraging.

Associazione Italiana Radioterapia Oncologica

Thank you!!