

The role of Docetaxel, Cisplatin and 5-Fluorouracil induction chemotherapy followed by concurrent chemo-radiotherapy in locally advanced nasopharyngeal cancer

Hala A. Zaghloul¹; Gehan A. Khedr¹; Yousri Rostom¹; Dina Abdallab²

(1) *Clinical Oncology Department, Alexandria University, Egypt*

(2) *Department of Pathology, Alexandria University, Egypt*

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Abstract

Purpose: To evaluate Docetaxel based induction chemotherapy preceding concurrent chemoradiation in locally advanced nasopharyngeal carcinoma (LANC) determining its feasibility, efficacy (response rate and its impact on progression free survival and overall survival) and associated toxicities.

Patients and Methods: Retrospective review of LANC patients (T1, N1-3 and T2-T4, any N disease) treated with induction chemotherapy consisting of docetaxel, cisplatin, and 5- fluorouracil (TPF) followed by concurrent chemoradiation with weekly cisplatin. Response rate was correlated with overall survival (OS) and progression free survival (PFS).

Results: The study population included 48 patients. Six patients (12.5%) achieved complete response (CR) after induction chemotherapy. Patients were assessed 6-8 weeks after concurrent chemoradiation and 41 patients (85.4%) were found to have CR to all treatments. On multiple regression analysis the response achieved after completion of all treatments was significantly associated with tumor stage ($P<0.001$), nodal stage ($P= 0.002$) and treatment breaks ($P<0.001$). The 4year OS and PFS rates were 94.9% and 84.7%, respectively. The median OS and PFS intervals were not reached. Grade 3 mucositis developed in 25 patients (52.1%) while 3 patients (6.1%) suffered from Grade 4 mucositis during chemoradiation. There were no treatment related deaths.

Conclusion: This retrospective study confirmed the feasibility and tolerability of TPF induction chemotherapy followed by concurrent chemoradiation in LANC. Phase III trials are needed to further prove the benefit of this approach. (The international phase III trial entitled Groupe Oncologie Radiotherpie Tete et Cou (GORTEC) will answer the benefit of this approach).