

Evaluation of induction chemotherapy in locally advanced tonsillar carcinoma

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FOREWORD:

Tonsil cancer is part of the oro-pharyngeal cancers where can also be found the base tongue cancer, tongue cancer, soft palate cancer, hard palate cancer, salivary glands, pharynx (tonsil cancer, oropharynx cancer, nasopharynx cancer, pyriform fossa) nose cavity, larynx and face sinuses. It is estimated that there are about 30 possible locations of cancers in otorhinolaryngology (ENT).

MATERIAL AND METHOD:

The present paper is a longitudinal analytical research structured on two levels. Thus, in the first part of the research it was established a study procedure of case-control type, the results being statistically analyzed by determining the rates (Odds Ratio) in patients exposed versus those not exposed to various risk/protection factors in relationship with tonsil cancer.

The second part of the study is based on induction chemotherapy evaluation by analyzing the 2 protocols used in the study through cohort studies (RTC) retrospectively analyzed using groups of adults presenting locoregional advanced tonsil cancer diagnosis, randomized and tracked in parallel with control groups numerically identical.

The research material was selected out of the entire adult population with ENT pathology that turned to Emergency County Hospital between January 2005 - January 2011 (3273 cases). In the initial sample of the research, were enrolled 177 patients with tonsil epidermoid cancers diagnosed by histopathology examination that were compared with a control group.

To assess the induction chemotherapy, the clinical investigation aimed at tracking the other variables by choosing the specific criteria for inclusion / exclusion of a group of 80 patients with advanced locoregional tonsil cancer, which was further divided in three groups treated as follows:

Group A with 29 patients treated with radiochemotherapy according to standard procedures in the total dose of 66-70 Gy, excluding spinal cord to 40 Gy..

Group B with 20 patients treated with induction protocol chemotherapy, cisplatin-5-FU: Cisplatin 100 mg / m² iv – day 1, 5-FU 1000 mg / m² / day, iv, days 1-5: three cycles every 3 weeks followed by standard chemoradiotherapy as per protocols in force.

Group C which included 31 patients treated with induction chemotherapy paclitaxel-carboplatin protocol. Given protocol consisted of 3 cycles of chemotherapy - paclitaxel 175 mg / mp s.c. and AUC6 carboplatin followed by standard radiochemotherapy sequence.

RESULTS. DISCUSSIONS. CONCLUSIONS

The average age was 55 years. The most affected age was that of 48 and 64 (75%). Distribution by gender - 81.35% male and 18.64% female. Urban patients predominated 51.41%. Most patients declared the habitual toxic consumption (90.39%).

Applying induction chemotherapy leads to symptoms improvement caused by the presence of oropharyngeal tumor. Thus dysphagia was present at diagnosis in 29 patients in group C and only 8 patients after induction chemotherapy protocol PC while odynophagia, present in 96.7% cases, postchemotherapy revealed only at 7 patients. Tumoral superinfection identified in 12 patients (38.7%) remained after induction chemotherapy with protocol PC in 3 patients (9.6%). Statistically the correlation coefficient r is of 0.96 (95% CI 0,59-0.99), which shows a direct correlation between treatment and symptom reduction, with a **p = 0.0068**, statistically significant.

Complete clinical response rate at the primary tumor level and loco-regional ganglionic areas was **39%** for **group C**, **40%** for **group B** of treatment and **36%** for **group A**; the partial response rate was of 48% for **group C**, 45% for **group B** and 42% for **group A** of treatment. Induction treatment with paclitaxel and carboplatin does not show changes in body mass index variation (BMI). Induction chemotherapy protocol cisplatin-5FU, modifies BM downwards (22.7 to 19.9).

Hematologic toxicity of paclitaxel-carboplatin induction protocol included assessment of *hemoglobin*, the toxicity **grade I** being noticed in 37.6% of cases and **grade II** - in 1.79% cases. The hematological toxicity determined at the level of *neutrophils* was present in **grade I** to 25.5% and in **grade II** to 4.6% of patients. There were not present toxicities of grade III and IV within the studied group. At the thrombocytes level the toxicity **grade I** stood out in 17.2% of cases and toxicity **grade II** was of 4.2%. Hematological toxicity of cisplatin-5-FU protocol also included the assess of *hemoglobin*, of thrombocytes and leukocytes. At hemoglobin level toxicity **grade I** was observed in 55% and toxicity **grade II** in 20% of patients. The neutrophil toxicity **grade I** was observed in 75% of cases and toxicity **grade II** in 25% of patients. There was recorded grade I of renal failure in 6.45% cases in group C and 15% in group B, while grade II renal toxicity was not recorded in patients from group C but it was present in group B in 5 % cases. Liver toxicity grade I was present in 9.67% of cases in group C and 10% cases in group B. Non-hematological toxicity in PC protocol was the *myalgia / arthralgia* and gastrointestinal toxicity in 80% of patients (60% **grade I** and 20% **grade II**).

61.3% of patients required supportive treatment, of which 12.9% after each cycle of chemotherapy. Patient survival varies by stage of disease, thus the stage III presents a stabilized evolution after initial decrease, while stage IV (IVa and IVb, respectively) follows a descending line of evolution. The average survival of patients undergoing induction chemotherapy is **46.7 months** versus the exclusive radiochemotherapy group (33 months). Response rate may be a **predictive factor** responsible for assessing survival. ECOG at the hospitalization was found to be limited as a predictive factor. Until the final diagnosis it takes on average 6-12 months. The maximum number of specialists

consulted by a patient with tonsil cancer to a definitive diagnosis, was 6 doctors. The average number of examinations ENT / oncology patients in the study was 12 examinations. Financial cost of tonsil cancer is on average **9690 euros**. In terms of total cost for group B - involving 5 days hospitalization, costs are higher, as opposed to group C patients in outpatient treatment or within day hospitalization.