782

CLINICAL PROGNOSTIC FACTORS FOR LOCAL CONTROL IN OROPHARYNGEAL CARCINOMA. A MULTIFACTORIAL ANALYSIS

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We retrospectively reviewed 288 patients with newly diagnosed, biopsy proven carcinoma of the oropharynx treated with radical radiotherapy at our Department between July 1964 and December 1989. Patients with relapse of an oropharyngeal carcinoma, those treated for palliation, those who had been given part of their radiotherapy treatment elsewhere, and those who voluntarily did not finished the prescribed treatment course were excluded from the analysis. One hundred and sixty two patients were treated with external beam RT (EBRT) alone, 81 patients with EBRT plus ^{192}Ir brachytherapy boost, 20 patients with surgery and postoperative RT, 22 patients with ^{192}Ir brachytherapy, and three patients died during treatment.
The probability for local recurrence-free survival (LRFS) was calculated using the Kaplan-Meier method and differences between curves were evaluated by the Mantel-Cox test. The obtained significant variables in the univariate analysis were analyzed using the proportional hazards model of Cox.
In the univariate analysis, the following variables were associated with significant differences in LRFS: alcohol intake ($p < .03$), weight loss ($p < .0005$), hemoglobin level ($p < .03$), tumor site ($p < .007$), histological type ($p < .05$), T-Stage ($p < .007$), tumor diameter ($p < .002$), uvular extension ($p < .03$), invasion of bone ($p < .0001$), hypopharyngeal extension ($p < .01$), and gingival extension ($p < .05$). In the **multivariate analysis (Cox regression analysis)**, five independent variables were found to significantly influence LRFS: ***invasion of bone*** [95% confidence interval of relative risk (RR): 1.7 - 9.4], ***weight loss*** [RR: 1.4 - 4.7], ***tumor diameter*** [RR: 1.3 - 3.1], ***alcohol intake*** [RR: 1.2 - 2.8], and ***N-Stage*** [RR: 1.03 - 1.3]

783

SQUAMOUS CELL CARCINOMA OF THE BASE OF THE TONGUE: BRACHYTHERAPY BOOST INCREASES LOCAL CONTROL PROBABILITY.

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We reviewed 101 patients with newly diagnosed, biopsy proven squamous cell carcinoma of the base of the tongue treated with radical radiation therapy at our Department between July 1964 and December 1989. Patients presenting with recurrent tumors, those partially treated elsewhere and those treated for palliation were excluded. Fifty three patients [3 T1, 11 T2, 21 T3 and 18 T4] were treated with external beam RT (EBRT) alone (the mean dose was 70.65 Gy). Thirty seven patients [4 T1, 15 T2, 11 T3, and 7 T4] were treated with EBRT plus ^{192}Ir brachytherapy boost, using hairpins in 35 cases and loops in two cases (the mean dose was 78.37 Gy). Four patients [2 T!, 1 T3, 1 T4] were treated with surgery and postoperative RT (the mean dose was 64.4 Gy). Seven patients [3 T1, 3 T2, and 1 T3], four of them with previous irradiation in the area, were treated with ^{192}Ir hairpins implant alone (the mean dose was 62.35 Gy). Probability for local recurrence-free survival (LRFS) was calculated using the Kaplan-Meier method and differences between curves were evaluated by the Mantel-Cox test. The obtained significant clinical variables in the univariate analysis and the variable "treatment modality" were analyzed using the proportional hazards model of Cox. This multivariate analysis was restricted to T1, T2 and T3 staged cases treated with EBRT alone or EBRT plus ^{192}Ir brachytherapy boost.
The 3 year LRFS for was 42% for T1, T2 and T3 staged cases treated with EBRT alone and 67% for T1, T2 and T3 staged patients treated with EBRT plus ^{192}Ir boost ($p < .05$). In the multivariate analysis, only treatment modality (EBRT alone *vs.* EBRT plus ^{192}Ir boost) was found to influence LRFS. The probability of local failure was twice higher among patients treated with EBRT alone compared with those treated with EBRT plus ^{192}Ir boost [95% confidence interval of relative risk: 0.99 to 4.2]

784

Radiochemotherapy with cisplatin (CDDP) and 5 FU (FU) for advanced squamous cell carcinoma of head and neck cancer (SCCHN).

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From 1990 to 1991, 31 previously untreated patients (pts) with stage III and IV SCCHN received three cycles of CDDP 100 mg/sqm day 1-21-42 IV bolus and FU 350 mg/sqm day 1 to 6 in constant infusion rate of 120 H. Simultaneous radiation therapy (RT) was given at dose of 70 Gy in 7-8 weeks to primary and involved neck nodal areas. There were 26 males and 5 females with a mean age of 58.5. Primary sites were oropharynx 17, oral cavity 7, larynx 4 and hypopharynx 3. Toxicity on oral mucosa was severe with a mean radiation interruption of 15 days (range 4-28). Over 94 courses of chemotherapy there were 20 grade 3 and 4 myelosuppression. One patient died of renal toxicity. Responses were seen at all dose levels. 27 of 31 pts were evaluable, 21 (78 %) had complete response (CR) and 6 (22 %) had partial response. With a mean follow up of 16 months, median survival was not reached and 15 of CR's are alive and disease free.

785

T1-T2N0 SQUAMOUS CELL CARCINOMA OF THE MOBILE TONGUE: TREATMENT WITH BRACHYTHERAPY ALONE INCREASES SURVIVAL PROBABILITY

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Between July 1964 and December 1990, three hundred ninety five patients with squamous cell carcinoma of the mobile tongue were admitted at our Department. One hundred fifty three of them who presented with newly diagnosed, biopsy proven, stage T1N0 or T2N0 tumors and received radical irradiation at our Department are evaluable for this study. There were 108 male and 45 female, ratio 2.4:1. There were 62 T1N0 cases and 91 T2N0 cases. Ninety three patients [45 T1 and 48 T2] were treated with ^{192}Ir interstitial brachytherapy alone (^{192}Ir alone) to a dose of 60 to 70 Gy, without elective treatment of the neck. Sixty patients [17 T1, 43 T2] received ^{60}Co external beam irradiation to the primary and the neck to a dose of 50 Gy followed by ^{192}Ir brachytherapy boost to a dose of 20 to 30 Gy (EBRT + ^{192}Ir). Differences in tumor diameter between both groups were not significant.
Probabilities for local recurrence-free survival (LRFS), nodal recurrence-free survival (NRFS) and adjusted survival (AS) were calculated using the Kaplan-Meier method and differences between curves were evaluated by the Mantel-Cox test.
The 3 year LRFS was 87% for patients treated with ^{192}Ir alone and 68% for patients treated with EBRT + ^{192}Ir ($p < 0.005$). The 3 year adjusted survival was 86% for patients treated with ^{192}Ir alone and 68% for those treated with EBRT + ^{192}Ir ($p < 0.05$). The 3 year NRFS was 81% for both groups.
We conclude that treatment with ^{192}Ir brachytherapy alone achieves higher local control rates than treatment with ^{60}Co external beam irradiation plus brachytherapy boost in T1-T2N0 mobile tongue carcinomas. This increment in local control probability translates into higher survival rates.

786

VALUE OF TRANSMANDIBULAR RESECTION (COMMANDO) AS FIRST OR SALVAGE TREATMENT IN 78 OROPHARYNGEAL CARCINOMAS.

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From 1982 to 1990, 78 oropharyngeal squamous cell carcinomas were treated by transmandibular resection (commando) with pectoralis major myocutaneous flap reconstruction : 41 patients as first treatment followed by external radiotherapy and 37 as salvage post radiation. Comparing the two groups, there is no statistical difference in term of age and tumoral status whereas 80,5 % T3 T4 in the first group and 51,4 % in the salvage group. Sex and nodal status appears to be stagistically different with more women and N0 clinic in the salvage group : respectively 21 %/2,4 % and 94,6 %/58,5 %.
2 and 5 years global survival are 56,6 % and 31,9 %. No statistical difference appears between the 2 groups. 2 years : 49 %/63 %, 5 years : 44 %/29 % for respectively salvage and first treatment.

787

CONCOMITANT RADIOTHERAPY AND CISPLATIN IN ADVANCED HEAD AND NECK CANCER

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A preliminary study was started in 1990 at the Radiotherapy Dept. of Florence on advanced tumors of head and neck, combining standard radiotherapy (rt) with concomitant cisplatin (Cddp). Our primary aim was to establish feasibility of such a combined treatment approach. Any previously untreated patient with stage III or IV (UICC 1987) head and neck cancer and with normal haematological renal and liver values were considered eligible for the present trial. Patients older than 75 years and with a KPS of less than 70 were excluded. From August 1990 to February 1993 27 patients were recruited. Age ranged from 35 to 69 years (average 56 years); there were 23 males and 4 females.All cases were histologically proved tumors of epithelial origin (21 out of 27 epidermoid carcinoma). Distribution by site was as follows: 3 nasopharynx, 10 oropharynx, 3 hypopharynx,3 oral cavity, 5 paranasal sinuses, 1 larynx, 2 salivary glands. All cases were stage IV. Patients were irradiated with a cobalt 60 machine or with a 6 MeV linear accelerator delivering a total dose from 60 to 70 Gy (mean dose 66 Gy). Cddp was given via a peripheral line with continuous iv. infusion concomitantly with the first 3 weeks of radiotherapy (days 1-5,8-12,15-19); 5.5 mg/sqm were deliverd on the average; in the group of 21 patients who completed the combined treatment section the mean total delivered dose of Cddp was 143 mg. Gastrointestinal renal and haematological toxicities have been scored according to the WHO grading system; in only 1 case vomiting (grade 4) lead to interruption of administration of Cddp; haematological toxicity of grade 3 was observed in 2 patients; there were no grade 3-4 renal toxicities.Prolongation of treament due to mucositis appeared to be slightly more frequent than after rt alone.All acute toxicities were transient and completely reversible.We will also report results in terms of response rate and preliminary survival data. We conclude that this combined approach seems to be well tolerated and deserves further evaluation.