752

**A RETROSPECTIVE ANALYSIS OF 201 NASOPHARYNGEAL CARCINOMA PTS TO COMPARE STAGING CLASSIFICATIONS.**

Licitra L, Grandi C, Cavina R, Kenda R, Boracchi P, Demicheli R, Molinari R, Bonadonna G. *Istituto Nazionale Tumori, Milan, Italy.*

A retrospective analysis was carried out on 201 consecutive pts with nasopharyngeal carcinoma (NPC) treated at our institution from 1980 to 1991. M/F ratio was 133/68, median age was 50 yrs (range: 9-81). Histotype was: undifferentiated, 178 pts; squamous, 22 pts; unspecified, 1 pt. Staging included physical exam, endoscopy, biopsy, chest X-ray in all cases. CT-scan was done in 89 pts. Tumor extension was defined according to 4 classifications: UICC, 1987; Ho, 1978; Changsha, 1979; Grandi, 1991. Median follow up was 68 mos. Treatment was radiotherapy (RT), 135 pts; chemotherapy (CT) + RT, 64 pts; CT only, 2 pts.

The following table enlists the 5-yr OS by stage (with the fraction of all the patients in that stage in brackets) according to each classification.

| stage | *UICC* | *Ho* | *Changsha* | *Grandi* |
|---|---|---|---|---|
| I | 75% (0.07) | 83% (0.14) | 73% (0.09) | 100% (0.04) |
| II | 100% (0.07) | 70% (0.36) | 67% (0.14) | 81% (0.25) |
| III | 63% (0.15) | 59% (0.33) | 67% (0.51) | 57% (0.4) |
| IV | 58% (0.71) | 46% (0.13) | 45% (0.26) | 43% (0.25) |
| V | - | 0% (0.04) | - | 68% (0.06) |

A Cox model was built to assess, for each staging classification, the value of stage in terms of hazard-ratio in refining the prognosis of NPC patients. Current classifications seem to vary widely in their ability to stratify this patient population into relevant subgroups with actually differing prognosis. A consensus should be actively searched on which staging classification to use in clinical practice and research.

753

THE STUDY OF TUMORAL, RADIOBIOLOGICAL AND GENERAL HEALTH FACTORS THAT INFLUENCE THE RESULTS IN A SERIES OF 448 ORAL TONGUE CANCERS TREATED BY IRRADIATION ALONE.

PERNOT M., MALISSARD L, HOFFSTETTER S, PEIFFERT D, LUPORSI E.
Centre Alexis Vautrin VANDOEUVRE-LES-NANCY France

Of the 448 cancers of the mobile tongue, 181 cases were treated by brachytherapy to the primary site only or by combined external irradiation (EBI) and brachytherapy (Br) (267 cases).

The results at 5 years for the total series are : local control (LC) 68%, locoregional control 58%, specific survival 45%, global survival 44%.The LC for T1 T2 and T3 are 93%, 65 % and 49 % respectively.

In univariate analysis, the control parameters that influence significantly and favorably with a low p<0.05 are : small-sized tumors ( ≤ 2 cm / ≤ 3 cm / ≤ 4 cm / > 5 cm) ; assuming equal size, the absence of infiltration outside the mobile tongue ; localisations in the inferior part of the tongue or in the pelvilingual sulcus better than the localisation on the edge of the tongue ; LC by Br only better than by EBI + Br for T1T2N0 ; an interval ≤ 20 days between EBI and Br ; finally a safety margin around the tumoral volume included in the isodose of Br during the treatment. This safety margin is appreciated by the ratio treated surface / tumoral surface.

The general state of health intervenes but not significantly. The dose rate within the usual limits is not significant ; nor is the total dose delivered because it was adapted to the tumoral infiltration in each case and is not comparable from one patient to another.

For complications, the only significant factor is the size of the surface treated (less complications if the treated surface is ≤ to 12 cm $^{2}$). A multivariate analysis is in progress.

Mobile Tongue Carcinoma - Brachytherapy and External Beam Irradiation
Radiobiological study

754

MANAGEMENT OF THE NECK IN NO ORAL CARCINOMA

BRUGERE J., VALIDIRE P., MOSSERI V., RODRIGUEZ J., BRUNIN F., POINT D.
Institut CURIE. 26 rue d'Ulm. F 75231 PARIS Cedex 05

From 1960 to 1985, 574 patients (pts) with a squamous cell carcinoma of oral cavity N0 were treated, the primary by brachytherapy and the neck by various types of dissection, homolateral in 215 pts and bilateral in 359. Post-operative deaths were 5/574. Positive nodes (N+) were found in 135 pts (24 %). Out of 135 N+, the capsula was broken (N+ CS+) in 58 (43 %) and preserved (N+ CS-) in 77 (57 %). Post-operative irradiation was applied to 42/135 N+, 31/58 N+ CS+ and 11/77 N+ CS-.

After over 6 years, nodal recurrences were 65: 26 were associated with a recurrence of the primary and 39 isolated. Out of the 39 isolated nodal recurrences, 31 appeared in dissected areas; 22 occured in the 439 N- pts (5 %) and 17 in the 135 N+ (12.6 %). Out of the17 nodal recurrences, 13 were in 93 N+ not irradiated pts (14 %) and 4 in 42 N+ irradiated pts (9.5 %), (N S). In the 77 N+ CS- pts, out of 10 nodal recurrences, 9 were in 66 non irradiated pts and 1 in 11 irradiated pts (N S). In the 58 N+ CS+ pts, out of 7 nodal recurrences, 4 were in 27 non irradiated pts and 3 in 31 irradiated pts (N S). 192 pts developed a second primary, 116 in upper aero-digestive tract, 26 in lung, 22 in oesophagus and 28 elsewere. The low rate of isolated recurrences in the neck of N0 N+ pts allows to limit post-operative irradiation to the N+ CS+ pts. Keeping in reserve irradiation of the neck makes possible radiotherapy of further second primaries.

755

CAN SPECT-SCC-IMMUNOSCINTIGRAPHY IMPROVE THE RADIATION THERAPY PLANNING OF SQUAMOUS CELL CARCINOMA OF HEAD AND NECK ?

Adamietz I.A., Schemmann F., Baum R.P., Knecht R., Howaldt H.P., Klein C., Hör G., Böttcher H.D.
University Hospital, Theodor-Stern-Kai 7, D-6000 Frankfurt 70, Germany

The definition of target volume in head and neck tumors is usually based on clinical- and histopathological findings, ultrasound and computed tomography. However, the information provided by these methods is limited and may lead to the false estimation of target volume. The purpose of this study was to find out, whether SCC-Immuno-SPECT can improve the definition of target volume.

30 patients with histologically confirmed squamous cell carcinoma (SCC) in the head and neck region received additionally to panendoscopy, sonography and CT-scan a pretherapeutic immunoscintigraphy using Tc-99m labelled SCC-antibodies (MAb 174H.64 IgG 1 subclass). The planning of a shrinking-field radiation therapy was performed without the results of SCC-Immuno-SPECT and then compared with information given by scintigraphy.

An additional information was found in n=9 (30%) patients. The target volume had to be changed in n=2 (7%) cases. In n=7 (23%) cases an alternative treatment plan had to be considered.

It is concluded, that SCC-Immuno-SPECT is a new promising method that enables to detect the disseminated disease in head and neck carcinoma patients. We expect that in future it will play an important role in planning of radiation treatment.

756

INTENSIVE SIMULTANEOUS CHEMORADIOTHERAPY (CT-RT) IN LOCALLY ADVANCED HEAD AND NECK SQUAMOUS CELL CARCINOMA (HNSCC).

A. Bensmaine, C. Borel, P. Wibault, E. Cvitkovic, G. Schwaab, G. Rccondo, C. Domenge, M. de Forni, T. Guillot, B. Luboinski, F. Eschwege, JP. Armand.

Institut Gustave Roussy - 94805- Villejuif (France).

Locally advanced HNSCC are poor candidates for combined approach including induction CT, surgery and/or RT. Since 1987, 56 patients (pts) have been designated for intensive simultaneous CT-RT : RT 70Gy/7w, 2 Gy/d/5d/w, CT : cisplatin (P) 80mg/m² (d5, d26, d47), 5FU 300mg/m²/d, cvi over 7w. Pts characteristics were : 55 M/1 F, median age 53 years (32-69), WHO PS 0-1 in 94%, no prior therapy except for 12 pts refractory to previous P-based CT. Primary sites included oropharynx : 26, hypopharynx : 15, oral cavity : 5 larynx : 4, other : 6. TNM distribution was : Mo : 100%, T1N3 : 1, T3N3 : 7, T4N0 : 6, T4N1 : 2, T4N2a : 7, T4N2b : 3, T4N2c : 3, T4N3 : 21, TxN3 : 5. 89% of the pts received full course of RT and 84% ≥ 75% of the planned dose of CT.

Grade 3-4 toxicities (WHO + RTOG) : mucositis 79 % (mean duration 2.5 months - mth-), radiodermatitis 25 %, leuconeutropenia 12 %, infection 12% (2 sepsis). All pts required prolonged enteral nutrition ; 9 showed weight loss > 10%. Other toxicities included : hypotension 2, arhythmia 1, confusion 1. 6 pts were likely to die of treatment-related complication. Other toxicities were manageable. 47 pts were evaluable for response (2 lost to follow-up, 4 early deaths, 3 early discontinuation) : 23 (41%) achieved CR, 15 (26%) PR. ORR was 67% (95 CI, 55%-79%). The median duration of response was 10 mth. Overall median survival was 16 mth ; the 2-year survival in responding pts was 38%. At a median follow-up of 12 mth (6 to 53) 13 pts showed local recurrence ; 11 pts (20%) are still alive NED with 5 long-term survivors (31+, 32+, 35+, 44+, 53+ mths). This regimen is feasible, with a strict selection of pts and intensive supportive care. A high rate of local control was achieved and a subgroup of pts might be cured by this intensive CT-RT.

757

**A PHASE III TRIAL OF NEOADJUVANT CHEMOTHERAPY IN HEAD AND NECK CANCER.** ***A. Paccagnella, P.L. Zorat, A. Orlando, C. Marchiori, V. Chiarion-Sileni, A. Jirillo, L. Tomio, A. Fede, A. Gava, M.V. Fiorentino.*** **Medical Oncology Department, Padua General Hospital and GSTTC, Italy.**

**Study Objective** Phase III, multi-institutional, randomized study of 4-cycle DDP (100 mg/m2)+ 5-FU (1000 mg/m2 120 h) + locoregional therapy (A-Arm) vs. locoregional therapy alone (B-arm); locoregional therapy consisted of RT only for inoperable patients (pts) and T+N surgery (S) followed by RT in operable pts; the evaluation for operability was performed before randomization. Pts were stratified by clinical stage (III vs. IV), Karnofsky PS (< 70 vs. ≥ 70) and Institution.

**Results** 237 (118 A-arm and 119 B-arm) pts have been enrolled from March, 1986 to February, 1990; 85 (36%) had stage III and 152 (64%) stage IV; 15 (6%) PS <70 and 222 (94%) PS ≥70; 66 (28%) were operable and 171 (72%) inoperable. 71 (60%) A-arm pts vs 66 (55%) B-arm pts have been made free from disease, with a 2-year DFS of 49% vs 38% and 3-year DFS of 37% vs.33% (P=N.S.); distant metastases occurred in 11% A-arm vs.30% B-arm pts (P=0.02). 91 A-arm vs 100 B-arm pts have died, with a 2-year Overall Survival (OS) of 37% vs 29% and a 3-year OS of 29% vs 20% (P=N.S.). Within 171 inoperable pts: combined DDP-5FU+radiotherapy (A-arm) achieved a 44% complete remission rate vs 29% of radiotherapy alone (B-arm)(P=0.03); 2-year DFS was 48% vs 28% and 3-year DFS 34% vs 26% (P=0.06). The 2-year and 3-year OS ware respectively 29% vs 19% and 24% vs 10% (p<0.05).

**Conclusions** Effective neoadjuvant chemotherapy significantly improves local control and long term survival in inoperable pts.