

system before treatment (BT) and after 3 courses of CT. Objective response based on clinical examination (CE) and CT-Scan was achieved in 19/38 patients. The regression stage (RS) based on tumors histology obtained surgically ($n = 28$) after 3 courses of chemotherapy was achieved in 8/28 patients. Total glutathione (GSH), glutathione-S-transferase (GST) activity and GST- π content were assayed on cytosols of total blood. For each cycle and each pt, GST activity and GSH content were investigated by spectrophotometric assays, GST- π by Western blot. According to CE and RS, our results showed difference between non responders (NR) and objective responders pt (R) only for GST activity. The difference was significant after one course of CT [according to CE for NR (5 ± 2 nmoles/min/mg) and R (4 ± 2 nmoles/min/mg) ($P < 0.05$), according to RS for NR (5 ± 2 nmoles/min/mg) and R (3 ± 1 nmoles/min/mg) ($P < 0.01$)]. No difference were detected for GSH and for GST- π . These preliminary results suggest that GST activity plays a role in the chemoresponse of HNSCC pts. Patients with decreased GST activity may be more chemosensitive than others. Indeed, it is too early to detect some correlation between disease free and overall survival.

This work was supported by funds from Institut Gustave-Roussy, Grant 93.7.

403 POSTER TIME INTERVALS VERSUS PROGNOSIS IN COMBINED TREATMENT OF SQUAMOUS CELL CARCINOMA OF THE HEAD AND NECK

J. Engellau, Ulf K. Zätterström, E. Kjellén
Department of Oncology, and Oto-rhino-laryngology/Head and Neck Surgery, University Hospital, Lund, Sweden

The present study investigated whether clinical outcome correlated with the length of different time intervals associated with combined treatment of 186 cases of primary cancer of the oral cavity. Unexpectedly it was found that patients with short time to start of treatment had significantly worse prognosis than patients with longer time to treatment. Median survival was 27 months in the first group as compared to 77 months in the other. Further analysis revealed that in the group with short time to first treatment, significantly fewer patients received radiotherapy (RT), time intervals between surgery and RT was longer and the overall treatment time tended to be longer. From our study we conclude that a standardized combined treatment regime with careful planning of time intervals once the treatment has started, is more important to the outcome than variations in the duration of the time interval between first diagnosis and start of treatment. Patients with pre op RT had better prognosis than patients treated with post op RT. Chemotherapy did not have effect on patient survival.

404 POSTER INTERSTITIAL BRACHYTHERAPY FOR ORAL CAVITY CARCINOMA: SEARCH OF THE FACTORS RESPONSIBLE FOR LATE COMPLICATIONS

J. Fijuth, Z. Dańczak-Ginalska, T. Burzykowski
Department of Radiotherapy, Cancer Center, M. Skłodowska-Curie Institute, 02781 Warsaw, Poland

In order to identify the factors responsible for late postradiological necrosis (l.n.) a retrospective analysis of 100 pts with a squamous cell carcinoma of the oral cavity treated with Ir-192 interstitial brachytherapy (BRT) between 1967 and 1992 has been performed. M/F ratio was 73/27, median age was 57 yrs (range 21–82). There were 82 oral tongue, 9 floor of mouth and 9 cheek mucosa pts. TNM stage was: T1-13, T2-50, T3-37, N0-65, N1-31, N2-4. Pts received 60–75 Gy (m. 69.2). Linear activity of Ir-192 wires was 0.75–2.68 mCi/cm (m. 1.46). Dose rate (d.r.) range was 25–114 cGy/t (m. 57) and time of treatment was 53–280 hrs (m. 134). Overall 3-year survival was equal to 61%. At first clinical control, 2 mos after BRT, 95 pts obtained local CR. However, only 86 pts were disease-free (9 were N+). In the group of disease-free pts probability of 3-year disease-free interval was 55.8%. Severe (grade 2&3) soft tissue and bone l.n. occurred in 28 pts and 8 pts respectively. In 89% of cases l.n. was observed during the first 18 mos after BRT. Probability of 3-year l.n.-free interval was 71.5%. In the univariate analysis of the time to appearance of l.n. the following factors were considered: T-localization, age, sex, T-stage, total dose and d.r. Only the effect of the T-localization has been found to be statistically significant ($P = 0.0004$).

405

POSTER

ADENOMATOUS GOITER AND THYROID GLAND CANCER

S.A. Geshehin, V.L. Zimovsky, V.I. Girlyia
Department of surgery, Medical university, 270000, Odessa, Ukraine
Probability of cancer /Ca/ detection in the tissue of adenomatous goiter /A.g./ determines the way of treatment. 3591 patients with goiter have been operated in our department during 50 years (1945–1995). The share of A.g. has reached 68%. Of 595 patients with A.g. who have been treated over the last 20 years 178 (29.9%) presented with Ca in the tissue of recidives Ca was detected in 60% cases. The histological structure of our data: follicular Ca—45.7%, papillary Ca—19.7%, mixed form—30.8%, low differentiated—3.8%. We consider adenomatous and recurrent goiter as a group of risk. The principles of a surgical operation: extrafascial resection of thyroid gland, obligatory revision of the regional lymphocollctor, neck-dissection in the cases of metastatic damage of lymphatic knots. Patients with T3-4, N1, G3-4 receive gamma-therapy. We use no cytostatics. All patients after operation need thyroindinum or triiodthyroninum.

406

POSTER

CARCINOMA OF THE NASAL CAVITY AND PARANASAL SINUSES: A RETROSPECTIVE STUDY OF 169 PATIENTS

C. Grau, G. Harbo, T. Brundgaard, M. Overgaard, O. Elbrend, H. Sogaard, C. C. Gadeberg, M. Hjelm-Hansen, J. Overgaard
Department of Oncology, Head & Neck Surgery, and Pathology, Aarhus University Hospital, Aarhus, Denmark
Department of Experimental Clinical Oncology, Danish Cancer Society, Aarhus, Denmark

In the period 1963–1992, a total of 169 consecutive patients with carcinoma of the nasal cavity and paranasal sinuses were treated at our institution. The histological types included squamous cell carcinoma (75%), adenocarcinoma (22%), and undifferentiated carcinoma (3%). All adenocarcinomas were located in the nasal cavity and generally associated with occupational exposure to sawdust. Eleven percent of all patients had positive neck nodes at the time of diagnosis. A combined radiotherapeutic-surgical approach was used throughout the entire period. Twenty patients had no or only palliative treatment. The overall actuarial ten-year loco-regional tumor control was 37% and the corrected survival 36%. The failure pattern was 80% in T-position, 28% in N-position and 18% distant metastasis. Univariate analysis showed a significantly worse prognosis for high T-stage, nodal involvement, maxillary sinus tumors, low histological differentiation, and high age. In the Cox proportional hazards model, the strongest prognostic parameters were T-stage and differentiation. T-staging of maxillary sinus tumors according to Lederman (1970) was more prognostic than the AJC/UICC staging system. Finally, the present data revealed that the overall treatment results have not improved over the last three decades despite refinements in diagnostic and therapeutic capabilities.

407

POSTER

CURE RATE AFTER LONG-TERM FOLLOW-UP IN HEAD AND NECK CANCER

J.J. Grau, J. Estapé, J. Traserra, M. Galán, M. Daniels
Department of Oncology, School of Medicine, University of Barcelona Clinic Hospital, Villarroel 170, 08036 Barcelona, Spain

Between 1973 and 1993, 1355 consecutive head & neck cancer patients were diagnosed and treated with a multidisciplinary approach, and followed until death or until 10 years with no event of disease. Primary patients incidence site were 615 in supraglottis; 280, oral cavity; 254, glottis; 126, hypopharynx; 33, oropharynx, and 47, nasopharynx. Local relapse rate was 20% and node-regional relapse rate other 15%. Distant metastases were observed in 6% of patients, mainly arising from nasopharynx (23%), followed by hypopharynx (11%). Main organ involved was lung (50%).

Median follow-up was 10 years (range 4 months to 15 years). Cancer cure was observed after 5 years in glottis, supraglottis, mouth and nasopharynx cancer and after 2 ½ years in oropharynx and hypopharynx. Highest cure rate was 80% in glottis, followed by 70% in supraglottis, 45% in mouth, 30% in nasopharynx, 25% in oropharynx, and 20% in hypopharynx.

Second primary was observed in 7% and a third primary in 0.6% of the patients. Only in 7 patients the second or third primary was seen after 5 year of follow-up.

In head & neck cancer, curability is observed after 5 years from definitive therapy in glottis, supraglottis, mouth and nasopharynx, and earlier