

of the regimen in comparison to the standard 60 Gy prescription. After first results had been published in 1996, a final evaluation was now made.

Methods: 34 patients with locally inoperable NSCLC UICC stage III (74%) and IV (26%) were treated with a total reference dose of 32 Gy to tumor and mediastinum in two daily single doses of 2 Gy (PAIR). They were compared to 183 conventionally irradiated historical controls (C) selected from a preexisting database according to study inclusion criteria (65% III, 35% IV). 105 of them had been irradiated with a total reference dose of 60 Gy (C 60).

Results: While, certain prognostic factors were rather unfavourable for PAIR patients, their overall survival was significantly better compared to C ($p = 0.006$; median survival 8.6 vs. 5.6 months). Compared to C 60, no significant difference in overall survival was found (median survival 8.6 vs. 7.5 months). This was also true for the comparison among stage III ($p = 0.06$) or stage IV patients only. Cox regression analysis showed Karnofsky performance index and N stage being independent factors (including also UICC-stage, local control, T-stage, weight-loss, treatment, and LDH).

Conclusion: In the final evaluation of the pilot study, the survival of the PAIR patients was well comparable to that of the control group, and was especially not worse than that of C 60. We consider the PAIR-regimen a short, cheap and feasible alternative to the standard prescription of 60 Gy in advanced NSCLC.

1076

PUBLICATION

Phase II trial of docetaxel and carboplatin in the treatment of advanced non-small cell lung cancer

W. Schütte¹, I. Bork², B. Wollschläger², St. Schädlich¹. ¹Department of Internal Medicine II, City Hospital Martha-Maria Halle-Dölau; ²Department of Internal Medicine II, Martin-Luther-University Halle-Wittenberg, Germany

Purpose: Based on superior single agent docetaxel response rates in previously untreated (27% ORR) and pre-treated (21% ORR) patients (pts.) we initiated a phase II trial of docetaxel- and carboplatin-polychemotherapy in patients with stage III b-IV inoperable NSCLC.

Patients and Methods: Pts. with measurable disease without prior radio or chemotherapy, good performance status (PS) and without brain metastases. Treatment schedule consisted of docetaxel 90 mg/m² followed by carboplatin according to AUC 5, treatment was repeated at 3 week intervals for six cycles.

Results: 27 pts. have been included, 3 female, 24 male, mean age 60.4 (range 44–71) PS 0/1/2 in 6/14/7 pts., histology: squamous cell carcinoma: 13, adenocarcinoma 3, anaplastic cell carcinoma 8, large cell carcinoma 3; stage III B 16, stage IV 11.25 pts. were evaluable according to response (two pts. had allergic reactions), CR 0 and PR 9 (36%) were observed lasting 17 to 29+weeks. Grade 3 or 4 granulocytopenia occurred in 55.5% of the pts.. Non haematological toxicity (Grade 1–2), e.g. nail alterations and oedema, occurred in 66.6%.

Conclusions: Based on this preliminary analysis we conclude that the combination of docetaxel/carboplatin is active and well tolerated for the treatment of NSCLC.

1077

PUBLICATION

Symptom distress in patients with advanced non-small cell lung cancer treated with chemotherapy

D. Radosavljević, S. Jelić, S. Radulović, D. Gavrilović, I. Popov, Z. Nikolić-Tomašević. Institut za onkologiju i radiologiju Srbije, Belgrade, Yugoslavia

Quality of life (QoL) assessment became one of the most important end-points of clinical studies in advanced lung cancer, disease with high expression of symptom distress. In a prospective, phase III study, 210 patients were randomized to receive MVP (cisplatin 120 mg/m²) or MVC (carboplatin 500 mg/m²) chemotherapy regimen for IIb or IV stage of squamous cell lung cancer. Differences between cisplatin and carboplatin group were not observed by assessment of tumor response (RR = 34% for both groups) and functional status by ECOG scale. For assessment of QoL we used Rotterdam Symptom Checklist (8 items specific for lung cancer and 3 items related to social dimension of life were added) on 44 patients. Compliance in filling questionnaire was 100%. The leading symptoms and aspects of life quality during chemotherapy were evaluated.

At presentation, the commonest five items were: worrying, cough, tiredness, shortness of breath and nervousness. Analyzing all the cycles applied (177), the leading five items were: shortness of breath, financial troubles, worrying, cough and tiredness. In cisplatin and carboplatin group there were

no changes during treatment (Wilcoxon), except worsening of financial troubles after first cycle of chemotherapy, in cisplatin group. Comparing two groups, cough was less expressed in carboplatin group, but only after third cycle of chemotherapy (Mann-Whitney).

In conclusion, the commonest symptoms in patients with advanced lung cancer cover different domains -physical, psychological and social, including general as well as lung cancer specific problems. All of them could be emphasized thanks to multidimensionality of Rotterdam Symptom Checklist. We could also see that all symptoms persisted during treatment – it appears that in spite of 1/3 of responding patients, chemotherapy could not help in alleviation of symptom distress, in advanced lung cancer.

1078

PUBLICATION

Steroid hormone receptors in lung cancer: Differential expression, function and clinical significance

U. Kaiser, J. Hofmann, B. Wegmann, K. Havemann. Zentrum Innere Medizin, Philipps-Universität, Marburg, Germany

Epidemiologic data suggest a clinical role of steroid hormones in lung cancer: women with lung cancer have a significant longer survival than men, on the other hand use of exogenous estrogen seems to increase the risk of lung cancer.

By means of PCR technique, ligand binding studies and immunocytochemistry we studied 15 SCLC lines and 17 NSCLC lines for the expression of steroid hormone receptors: The glucocorticoid receptor (GR) and the vitamin D receptor (VDR) are ubiquitously expressed. Among the sex steroid receptors estrogen receptors (ER) are expressed in 30% of NSCLC lines but not in SCLC lines, progesterone receptors (PR) are present in 75% of NSCLC lines but rarely in SCLC lines, androgen receptors can be found in 50% of NSCLC lines but rarely in SCLC lines. Receptor expression in 51 primary tumor samples from NSCLC confirm the high expression rate of GR and VDR. Among different histologies adenocarcinomas show the highest rate of sex steroid receptor expression. Proliferation assays in six lung cancer cell lines reveal no significant effect in SCLC lines. In NSCLC lines glucocorticoids inhibit growth, vitamin D and progesterone have no effect whereas estrogen stimulates growth in a cell line stemming from an adenocarcinoma (NCI-H23).

Data suggest that glucocorticoids may be incorporated in NSCLC therapy. Estrogen may have a proliferative effect on adenocarcinoma of the lung. However, survival advantage of female patients with lung cancer is not explained by differential steroid receptor expression.

1079

PUBLICATION

Role of 99mTc-Sestamibi for diagnosis, staging and follow up of patient with lung cancer

S. Sergieva, D. Damianov, Ch. Hadjikostova, G. Kirova. National Oncology Center, Sofia, Bulgaria

Purpose: The aim of this work was to evaluate the clinical application of 99mTc-Sestamibi for diagnosis, staging and follow up of patients (pts) with lung cancer (LC).

Methods: Planar and SPET images were performed 30 and 90 min. after i.v. injection of 99mTc-Sestamibi in 19 pts (5 F; 14 M) with histologically proven LC (13 SCLC; 6 NSCLC) undergoing combined chemotherapy. In order to quantify Sestamibi uptake a Tumor/Background ratio (T/B) was calculated. 10 pts were also investigated after one and three months after chemotherapy.

Results: The mean T/B ratio in the studied pts was 1.50 (range 1.38–1.60), $p < 0.001$, before treatment. Out of 19 pts, 8 pts showed complete or partial response to the combined chemotherapy and parallel reduction of the mean T/B ratio – 1.26 (range 1.17–1.32), $p < 0.001$. Bone and brain metastases were visualized in 4 pts. In 7 pts it was established stable disease.

Conclusion: Our preliminary results show that 99mTc-Sestamibi is a useful, diagnostic method for pts with LC. Semiquantitative assessment of 99mTc-Sestamibi in LC was related to the tumor response after chemotherapy and may be used for evaluation and follow up of these pts.