859 POSTER

Influence of specific glycanstrutures on the epidermal growth factor receptor (EGF-R) on cell growth

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Purpose: The overexpression of the EGF-R on squamous cell carcinomas of the head and neck has been connected to malignant transformation but its role for the proliferation of the malignant cell and the factors determine the receptor-ligand interaction are still not clearly defined. The external domain of the EGF-R is known to carry glycan structures which might be important for the function of the receptor. Aim of our study was to investigate the role of the sialoglycan structures on the EGF-R for the proliferation of head and neck carcinomas.

Methods: On two squamous cell carcinoma cell lines we altered the specific glycostructures with neuraminidase from vebrio cholerae (desialylation) and with α-2,6-Sialyltransferase and CMP-neuraminicacid. Resulting effects were monitored by the cell proliferation with the BrdU-method (Proliferation assay and cell cycle distribution) and the EGF-R analysis with I-125 EGF for the Scatchard analysis to determine the receptor affinity.

Results: The results showed that the cell proliferation and the receptor affinity is dependent on the degree of sialylation. Desialylation led to a 35% reduction of the proliferation, the receptor affinity decreased to 30%.

Conclusion: The significance of the EGF-R for the cell proliferation seems to depend on the degree of sialylation. An release of enzymes by the tumor cells could auto-control the tumor proliferation.

860 POSTER

Smoking cessation in patients with head and neck cancer

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Purpose: Cessation of smoking improves significantly outcome of patients with head and neck cancer treated by radiotherapy. In Turku University Central Hospital patients usually receive preoperative radiotherapy up to 64/60 Gy in 7 weeks and they are operated after an interval of 4 weeks. We evaluated the effect of informative intervention to help the patient stop smoking.

Methods: A nurse (P.G.) from the Department of Oncology and Radiotherapy is trained to discuss smoking cessation with the patients. 14 patients were included in the study. The aim of the discussion is to encourage the patient to give up smoking, and he or she is given an informative brochure. The individual background history of smoking and the smoking habits are evaluated and the alternatives to overcome the side-effects are thoroughly discussed and registered.

Results: Four patients out of 14 patients have refused to stop smoking. Seven of the ten cooperating patients have succeeded to stop smoking.

Conclusion: We consider smoking cessation to be an important part of the patient care. The individual intervention by a special smoking cessation unit significantly helps the patient to quit smoking.

861 POSTER

Nasopharyngeal carcinoma: Two different treatments (radiotherapy vs neoadyuvant chemotherapy and radiotherapy)

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Purpose: In the last twenty years, two different treatments were used for nasopharyngeal carcinoma in our hospital: radiotherapy alone versus neoadyuvant chemotherapy and radiotherapy. We present a retrospective study that include the results of both options, survival rates and disease-free survival.

Methods: 68 patients were included, 34 (group A) received radiotherapy alone and 34 patients (group B) received neoadyuvant chemotherapy before radiotherapy. All the patients were treated with Cobalt-60; the mean doses was 64.3 Gy to the primary tumor and 60.5 Gy to the upper necks. The protocol of chemotherapy included cisplatin and 5-fluoruracilo, the patients received four courses and two or three weeks later they iniciated radiation therapy.

Results: *Group A:* 70.6% complete clinical response; relapse rate of 23.5%; five patientes presented distant metastases; survival rates at 5 was 53%; disease-free survival was 71.4% at 5 years. *Group B:* complete clinical response rate to neoadyuvant chemotherapy was 35.3%, after compete the treatment with radiotherapy the rate was 73.5%; relapse rate of 14.7%; three patients presented distant metastases; survival rates at 5 was 49.5%; disease-free survival was 77.2% at 5 years.

Conclusions: In our study neoadyuvant chemotherapy with radiotherapy has not demostrated improvement in complete response rate, survival and disease-free survival when compared with historic treatment with irradiation only. The relapse rate was lower when the patientes received neoadyuvant chemotherapy but there was a not significant difference.

862 POSTER

Percutaneous endoscopic gastrostomy versus nasogastric tube in patients with radiation therapy for head and neck cancer: First results

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In patients undergoing palliative radiation therapy for advanced cancer of the larynx, hypopharynx and tonsils (at least stage II, T2) the effect of feeding via percutaneous endoscopic gastrostomy (PEG) is evaluated by a physical activity index, a quality of life index and by Karnofsky index.

Methods: 40 patients with HNC were prospectively randomized to receive either feeding via PEG or conventional via nasogastric tube. The total observation period lasted 6 months. An additional endpoint was death.

Results: Until now 3 deaths occurred in the nasogastric group. All were related to aspiration pneumonia. Two patients from this group were crossed over to the PEG group due to aspiration. After 6 months no difference was found in the index of quality of life and physical activity index. No serious PEG-related complications occurred.

Conclusion: PEG significantly prevents aspiration in patients treated for HNC, but nutritional status, quality of life and physical activity are not significantly affected by PEG.

863 POSTER

Trimetrexate (TMTX) modulation of 5-fluorouracil/leucovorin (5-FU/LCV) in untreated head and neck cancer

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Purpose: TMTX is a dihydrofolate reductase inhibitor which has been shown to potentiate 5-FU cytotoxicity. Previous clinical trials in colorectal cancer demonstrate synergy between TMTX & 5-FU LCV. This study was designed to assess the use of TMTX/5-FU/LCV in untreated patients with unresectable/metastatic head and neck cancer.

Methods: TMTX (110 mg/m^2 iv) was administered 24 hours prior to LCV (500 mg/m^2 iv) & 5-FU (500 mg/m^2 iv) followed by oral LCV 15 mg q6h $\times$ 7. Treatment was repeated weekly for 6 weeks followed by 2 weeks of rest.

Results: 16 patients were accrued (3-metastatic; 13-locally advanced). patients received 1–2 cycles of therapy. 14 patients are evaluable for response, and all are evaluable for toxicity. Objective responses were achieved in 4 patients (29%) with 2 (14%) CR's. One was confirmed by biopsy. Grade 3 diarrhoea occurred in 3 patients, Grade 4 diarrhoea in 2 patients and 1 patient developed septic shock secondary to neutropenia which responded to treatment.

Conclusion: TMTX, 5-FU/LCV has shown to be an effective regimen which can be administered on an outpatient basis for treatment of advanced head and neck cancer with a remission rate of 29%.

864 POSTER

Clinical significance of cranial nerve involvement. Base of skull erosion and intracranial extension in nasopharyngeal carcinomas

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Aim: This study analyzes the clinical significance of cranial nerve involvement, base of skull erosion and intracranial extension in nasopharyngeal carcinomas.

Methods: From 1983 to 1996, 53 patients with T4 (TNM-AJC) nasopharyngeal carcinomas were treated with radiation therapy. There were 11 females and 42 males, their ages ranging from 9 to 78 years (median,

45 years). Thirteen had WHO tape 1.4 had type 2 and 36 had tape 3 carcinomas. Radiographic approach consisted of x-ray views of the skull in 14 and CT and/or MRI in 39. Thirty-six had cranial nerve involvement. 39 base of skull erosion and 12 intracranial extension. Four had N1, 10 had N2 and 18 had N3 nodal involvement. External beam radiation therapy consisted of 50 to 70 Gy (median 70 Gy) to primary tumor and 50 to 74 Gy (median 70 Gy) to involved nodes, delivered in 2 Gy daily fractions. Sixteen patients received 1 to 3 (median, 2) fractions, each of 5 Gy, of HDR intracavitary brachytherapy boost. Ten received neoadjuvant and 21 concurrent chemotherapy. Ultrasound hyperthermia was applied to 8 patients with N2-3 involved nodes.

Results: Follow-up ranged from 0.2 to 9.6 years (median, 1.8 years). Complete primary tumoral response was achieved in 39 out of 50 and complete nodal tumoral response in 28 out of 33 evaluable patients. Overall survival (OS) and disease-free survival (DFS) were 42.4% and 39.8%, respectively, at 2 years and 28.9% and 29.0% at 5 years. There were 9 primary and 1 primary and nodal tumoral failures among patients exhibiting complete response. There were 13 systemic failures among all patients. In univariate analysis, cranial nerve involvement and addition of chemotherapy were significant prognostic factors for OS and there was not any significant prognostic factor for DFS. In multivariate analysis cranial nerve involvement was the only significant prognostic factor for OS and there was not any significant prognostic factor for DFS.

Conclusion: In patients with T4 nasopharyngeal carcinomas, cranial nerve involvement appears to be the only clinically significant prognostic factor.

865 POSTER

Long-term results of chemotherapy in advanced thyroid carcinoma

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The prognosis of most patients (pts) with differentiated thyroid carcinoma (CA) treated with surgery plus ^{131}I is excellent. However, pts with advanced differentiated CA (T3–4 or N1) and those with medullary and undifferentiated CA face a poor prognosis. From 1984 to 1996, 87 cases of thyroid CA have been treated in our institution, including 11 with advanced differentiated CA (papillary 8, follicular 2, Hürthle cell 1), 3 with medullary CA and 3 with undifferentiated CA Median age: 51 years (26–77). Sex (male/female): 7/11. *Advanced differentiated CAs:* All pts had thyroidectomy (total in 3, partial in 8) upfront. Postoperative therapy included none in 1 pt (NED at 112 mo), chemotherapy (CHT) in 2 (bulky disease devoid of ^{121}I in 8 pts (2 in CR at 43 and 100 mo and 6 relapses after CR at 4 to 43 mo, 2 treated with repeated ^{131}I (in pr at 29 and 76 mo), 1 with no therapy (died at 14 mo) and 2 with CHT). Overall, 4 pts, all with measurable disease, were treated with CHT (adriamycin, vincristine, bleomycin) (AdBV)). All responded (2 CRs and 2 PRs, lasting 12, 59, 88+, 115+ mo). Two of these pts received external radiotherapy after response and 1 received ^{131}I. Two pts are alive at 122 and 156 mo and 2 died at 68 and 104 mo. *Medullary CA:* 2 pts presented with distant metastases and 1 developed them 57 mo after total thyroidectomy. Therapy: none, 1 pt (died at 4 mo); CHT (Ad/platin) (2 pts, both with PR) (1 alive at 3 mo, 1 died at 101 mo after PR to 3 lines of (CHT). *Undifferentiated CA:* All 3 pts were treated with CHT (ABV in 1 with no response and death at 6 mo and Ad/platin in 2 with 1 death at 1 mo and 1 PR lasting 5+mo). Adriamycin-based CHT is active in differentiated thyroid CA after relapse to surgery plus ^{131}I. Integration of CHT in the upfront management of selected pts with advanced differntiated thyroid CA is a reasonable thyroid CA is a reasonable approach.

866 PUBLICATION

Dose escalation in accelerated hyperfractionation for advanced head and neck cancer

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Purpose: Accelerated tumor repopulation during radiotherapy of head and neck cancer may worsen the possibilities of local tumor control. this can be compensated by dose escalation in accelerated hyperfraction.

Methods: 50 untreated patients with locally advanced head and neck SQ.C.CA received (1.2 GY BID 2 weeks- 1.4 GY BID 2weeks 1.6 GY BID 1.5 weeks) Total 74.4 GY immediate loco-regional response was assessed 6 weeks from the and of therapy.

Results: C.R. was achived in 62%, P.R. was achieved in 38%. The 2 year overall survial was 67.1% and the 2 year disease-free 57.8% survival was immediate loco-regional response and survival were affected by the primary tumor site tumor size and continuity of treatment the treatment was well tolerated by the majority of patients, muocsitis led to interruption of treatment in 22% cases.

867 PUBLICATION

Primary reconstruction after ablation of oral cancer – Effects on soft tissue function and life quality

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Purpose: The aim of the present prospective study was to evaluate the functional sequelae of intraoral tumor surgery and their impact on postoperative development of quality of life.

Methods: 40 consecutive patients had received ablation of squamous cell carcinoma of the floor of the mouth with immediate reconstruction of intraoral soft tissues after tumor resection by local (n = 27) and revascularized flaps (n = 13). Mobility of oral soft tissues was determined by ultrasound. Quality of speech was analyzed using the Freiburg Speech intelligibility test. Life quality of cancer patients was assessed by the functional living index/cancer (FLIC). All patients were evaluated preoperatively and 6 months after intraoral tumor surgery.

Results: A significant decrease in both the mobility of the tongue and the quality of speech was registered postoperatively. The most substantial effect on quality of speech resulted from decreased movement of the radix and the dorsum of the tongue. A significant postoperative increase in life quality occurred only in the group of patients without substantial reduction of intelligibility of speech, while no significant improvement of postoperative life quality of patients with more severe deterioration of speech quality was found.

Conclusion: Postoperative quality of speech has a significant effect on life quality after resection of oral cancer.

868 PUBLICATION

The arteriography technique of the thyroid cancer complex diagnosis

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Purpose: The diagnosis of the thyroid cancer is difficulty especially when the dimensions of tumor are very small or the primary manifestation of malady only from regional or distant metastasis. For solution of this problems had been used the diagnostic arteriography of the thyroid.

Methods: There were 41 thyroid arteriography: 20 – the selective ance, 21 – the brachiocephalic general trunk. The diagnostic criterion of tumor malignant was been definition of the thin network of vessels lesion in arterial phase (TNVL APH) or hemogeneous contrast of tumor in capillary phase of study.

Results: All patients were divided in 2 groups: I Gr. – 25 patients with diffusive increase of thyroid lobe (conform clinical, ultrasonography and scanning). By arteriography was detected TNVL APH Ø 1.0–3.0 cm in 12 patients; II Gr. – 16 patients with lesion of limphatic nodes – occult thyroid carcinoma. Confirm arteriography was detected primary tumor Ø 0.4–1.5 cm.

Conclusion: The arteriography is a very sensitive technique in the detection of small dimensions and occult thyroid cancer.

869 PUBLICATION

Successful treatment with paclitaxel/5-FU and simultaneous radiation in advanced H&N carcinoma

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Introduction: Paclitaxel (P) a new plant product has demonstrated significant antineoplastic activity in H&N tumors (ECOG study: 40%). Therefore we performed a trial with P/5-FU and simultaneous radiation in an neoad-