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,