Conclusions: The small group of pts renders presentation of univocal conclusions impossible. The treatment of pts with AG gives worse results than in the cases of AF and AP. Cht did not better results.

1282 POSTER

Whole brain irradiation versus limited fields in the treatment of high-grade malignant gliomas

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Purpose: Delineation of the target volume is a controversial issue in radiation treatment of high grade malignant gliomas. Our purpose was to verify if the choice of different volumes in radiation treatment influence the overall survival (OS). The effect of age, performance status, extent of surgery and histology was analysed for prognostic importance.

Methods: From January 1995 to June 2000, 75 patients (pts) with histologically confirmed malignant astrocitomas were treated. No patient was lost for follow-up. The total dose of 50-60 Gy was applied with 6Mv or Co60 teletherapy device, in one day fraccion of 1.8-2 Gy. The entire brain was irradiated in 40 pts (52%). In 11 pts (19%), the entire brain was first irradiated, and in a second phase the total doses were achived with reduced fields. Twenty four pts (29%) were treated with reduced fields directed to the treatment volume encompassing the contrast-enhancing lesion with a 2 cm margin based on preoperative MRI and CT. Survival was calculated using the Kaplan-Meier method. Significance of the differences was analysed with Log Rank test. The significance level was $p < 0,05$.

Results: Median survival was 9 months (range 2-68 months). There were 45 males (60%) and 30 females (40%), with a median age of 62 years (range 23-77 years). The pts were classified in three groups of age: <45, 45-65 and > 65 years. The OS for these groups were 21, 9 and 8 months (p= 0,0003). The median WHO performance status score was 2. Twelve pts had a score 0 (16%), 31 a score 1 (41%), 20 a score 2 (27%), 7 a score 3 (9%) and 5 a score 4 (7%). The OS for these groups were 25, 11, 6, 7 and 6 months (p=0,0003). Histology consisted of anaplastic astrocytoma (AA) in 12 (16%) and glioblastoma multiforme (GBM) in 63 (84%). The OS for AA was 15 months and for GBM 9 months (p=0,03). Eighteen (24%) pts underwent biopsy, 21 (48%) gross total resection, and 36 (48%) subtotal resection. The OS for these groups were 9, 10 and 9 months (p=0,28). The OS for pts who irradiated the entire brain was 7 months, while for those that irradiated the entire brain plus a boost was 11 months. The OS for pts who were treated with limited fields was 16 months (p= 0,0006).

Conclusion: In our series, age, performance status and histological subtype proved to be important prognostic factors. In high-grade gliomas there is no benefit in the irradiation of the entire brain. The best results are for pts who were treated with limited fields of irradiation.

1283 POSTER

Concomitant radiation therapy and temozolomide (TMZ) in the treatment of multiform glioblastoma and anaplastic astrocytoma: a pilot study

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TMZ has demonstrated efficacy against recurrent malignant gliomas (MG). We evaluated the tolerance of TMZ associated with radiation therapy (RT) in post surgery treatment of incompletely resected MG. From September 1998 to Dicember 2000, we treated 18 patients (15 glioblastomas, 3 anaplastic astrocytomas) with incomplete resection after surgery and an average residual disease of 3.25 cm (range 2-5 cm). Mean age was 58.6 (range 37-73 years); 7 patients were > 65 years. TMZ was given with a weekly schedule (150 mg/m2 daily for 5 days, repeated every 28 days for three times). TMZ was administered at the beginning of the fourth week of RT (dose 30 Gy) in 7 patients (Group A) and at the first day of RT in 11 patients (Group B). The average total dose was 65.6 Gy (range 54-70) with standard schedule. 3-D planning was performed for all patients with customized shielding and multiple coplanar beams arranged to include Planning Target Volume within the 95% isodose line. Two patients in group A completed RT but not the planned dose of TMZ: 1 due to progression after one cycle of TMZ and 1 due to kidney failure after two cycles. Two patients in Group B developed grade IV leuko-thrombocytopenia after two cycles of TMZ (RT 54 and 60 Gy). Of the latter, one died and one finished planned RT with some delay, obtaining partial remission. All 4 patients were older than 65 years. In the other patients, no toxicity was observed. Out the 16 patients that completed treatment an MRI/CT showed: 4 progressions, 5 stable diseases, 5 partial responses and 2 complete response (1 multiform glioblasoma and 1 anaplastic astrocytoma). To date, 9/18 patients are alive with a mean follow up of 16 months (range 8-21) from surgery. A overall survival analysis with Kaplan-Meier method showed a 35% at 24 months.

Conclusion: Concomitant RT and TMZ is feasible and well tolerated (compliance 70%) in MG patients with incomplete surgical resection. We had a tolerance problem in the patients older than 65 years.

1284 POSTER

Simultaneous radio-chemotherapy of malignant gliomas with topotecan

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Purpose: Because of the pronounced radioresistance of glioblastoma multiforme (GBM) the prognosis of this disease remains poor. Therefore, we investigated the impact of an additional simultaneous chemotherapy with the topoisomerase-I-inhibitor topotecan (TTC) on the quality of life and toxicity of radiotherapy.

Materials & Methods: In this multicenter trial patients with histologically proven GBM underwent a simultaneous radio-chemotherapy. Including pilot phase 60 patients, 41 male and 19 female, were treated. Age ranged from 26 to 76 years, the mean was 57 yrs. Conventionally fractionated conformal radiotherapy was performed with daily doses of 2.0 Gy to a total dose of 60 Gy. One hour prior to irradiation 0.5 mg (absolute dose) of TTC were administered intravenously resulting in a cumulative dose of 15 mg. Hematologic and non-hematologic toxicity and survival time were recorded. Quality of life was assessed by Karnofsky performance scale (KPS) and Spitzer-index (SI).

Results: Median administered dose of radiation was 60 Gy (32.4-76 Gy). Median cumulative TTC dose was 15 mg (5-19 mg). Grade-III toxicity was found in 6 cases (2x hematologic, 2x motoric disorder, 1x infection, 1x nausea) and grade-IV toxicity in 3 cases (1x esophagitis, 1x motoric disorder, 1x mental disorder). Two patients died of septic disease most likely caused by steroid induced immunosuppression. Mean KPS and SI initially, at the end of therapy and 6 wks after therapy showed values of 87%, 81% and 80% and 19 pts, 18 pts and 19 pts, respectively. The differences were all not significant. Median survival time was 13.5 months. This was slightly longer than a historical collective with a median survival of 10 months.

Conclusion: This multimodal approach for patients with GBM is well tolerated. Quality of life remains preserved and outpatient treatment is possible.

1285 POSTER

A phase II trial of topotecan and radiation therapy for CNS-metastases of patients with solid tumors

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Once the diagnosis of CNS-metastases in patients with solid tumors is etasblished, the prognosis is poor and there is a need for new concepts in therapy.

This is an interim-analysis of 68 patients with CNS-metastases due to solid tumors (14 SCLC, 36 NSCLC, 6 breast, 2 unknown) treated with a simultaneous therapy of topotecan and whole brain radiation (20 x 2 Gy, 20 x 0.4 mg/m* topotecan as short infusion within 2 h to radiation therapy) in a phase II clinical trial. At this time 54 patients finished the therapy, 14 patients are still in course, 45 patients are evaluable for toxicities and survival, 36 patients are available for evaluation of remission. Hematologic toxicity: anemia grade 3 one, grade 4 one; neutropenia grade 3 two, grade 4 one; thrombopenia grade 3 three, grade 4 two. Non-hematologic toxicity: sensorium grade 3 five; stomatitis grade 3 two; infection grade 3 one, grade 4 four. Infection occurred only in the beginning of the study if dexamethason was given at dosages > 12 mg daily. Remission: out of 36 at this time