grade I–II (n = 6), grade III (n = 6). and grade IV (n = 28)). (1) Median cytosolic levels of *uPA and PAI1* as determined by ELISA, were respectively 0.03 ng/mg protein (range 0.003–0.16) and 11.9 ng/mg protein (range 0.25–161.8). The highest levels of PAI1 were found in grade IV tumors as compared to grades I–III ($P < 0.001$). Expression of uPA and PAI1 was confirmed by Northern blot and *in situ* hybridization which localized PAI1 predominantly around neoangiogenic foci, both in tumor and endothelial cells. (2) *Expression of PAI2* antigen was heterogeneously distributed among tumors (median = 0.18 ng/mg protein, range 0.02–6.8) but was undetectable in control tissues. This data was confirmed by *in situ* hybridization. (3) *Univariate analysis* demonstrated that high levels of PAI1 are associated with a shorter disease-free survival both for the overall population ($P = 0.02$), and the grades IV ($P = 0.06$). In grade IV gliomas, high levels of PAI2 are, in contrast, highly correlated to a better overall survival rate at 18 months (48% vs 0%, $P = 0.015$). Our preliminary results suggest that, in malignant gliomas, PAI1 and PAI2 may be useful in the analysis of therapeutic protocols. Further studies should precise their biological role, in order to evaluate them as potential therapeutic target.

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INTRALESIONAL RADIOIMMUNOTHERAPY OF MALIGNANT GLIOMAS AS ADJUVANT SETTING IN NEWLY DIAGNOSED TUMOUR OR AS RESCUE TREATMENT IN RECURRENT LESIONS

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Two I-131 labelled murine Monocolonal Antibodies (MAbs) BC-2 and BC-4 raised against tenascin (TN), were intralesionally infused in 48 patients bearing a malignant glioma: 28 with recurrent disease (Rec) and 20 cases with newly diagnosed tumour (New). All patients were previously treated with surgery and radio-chemotherapy. Twenty-four Rec cases underwent further surgery which obtained a total or subtotal removal of tumour mass in 10 of these. In total 25 patients had intralesional RIT when the disease was minimal. The radiopharmaceutical was given at a dose of 4 mg of MAbs and 2405 MBq of ^{131}I. The infusions were repeated up to six. The local treatments were always well tolerated. The radiation dose to the tumour was on average >300 Gy per cycle. The median survival was, in total, 18 months. Intralesional RIT produced 12 complete remissions (6 in Rec and 6 in New), 6 partial remissions (4 in Rec and 2 in New). In 19 cases (15 Rec and 5 New) the progression of disease was recorded. The overall response rate was 37.5% (35.7% in Rec and 40% in New). These data demonstrate the capability of this new therapeutic technique to achieve, in a significant number of cases, a long lasting control of malignant gliomas and suggest the opportunity to apply this treatment when the disease is reduced owing to previous traditional cares. (Work supported by National Research Council program (Italy): Clinical Applications of Oncology Research, subproject n.8.)

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EMBOLIZATION AND RADIATION THERAPY OF CHEMODECTOMA OF THE TEMPORAL BONE

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Between September 1986 and January 1993, a total of 12 patients with primary (8) or recurrent (4) chemodectomas of temporal bone were treated. Diagnosis was assessed by clinical examination and radiographic studies (7) or by histological confirmations (5). All patients presented with group III disease and four presented with brain involvement. All patients were treated with embolization either within one week before initiation of radiation therapy (10), or 3 and 4 years before, respectively. All patients were irradiated with a wedged field technique using 60 Co gamma rays or 12 MV photons. The total tumour doses were 45 Gy/25 fx (4) or 50.4 Gy/28 fx (8). Ten evaluable patients have been followed for 13 to 84 months (median 32). Nine evaluable patients had local tumour control defined as having no evidence of progression of disease clinically or radiographically to the date of analysis, whereas in one patient tumour progressed. Cranial nerve paresis improved in 6 patients after a latency of 22 to 72 months (median 44). This study demonstrates that radiation therapy with preceeding embolization therapy is an effective treatment for advanced chemodectomas

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RADIATION THERAPY IN OPTIC GLIOMAS OF CHILDHOOD: PROGNOSIS AND LONG TERM SEQUELA

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Thirty-three children with the diagnosis of optic glioma were admitted to Department of Radiation Oncology in Ankara University Faculty of Medicine between 1973 and 1994. Twenty-two patients were female and 11 were male, with a female:male ratio of 2:1. Their ages ranged between 1 to 18 (mean:8.4, median:7). Six patients (18.2%) presented with neurofibromatosis. Twenty-nine patients (87.9%) had histopathological diagnosis of astrocytoma. Tumors were confined to the optic nerve in 5 patients (15.1%), confined to the chiasma in 6 patients (18.2%) and involved both the optic nerve and chiasma in 22 patients (66.7%). Subtotal resection of the tumor was performed in 20 patients (60.6%). Thirteen patients received irradiation as sole therapy. Two patients were irradiated for recurrent tumors. Mean follow-up was 158 months. Actuarial survival for 5 and 10 years were 91.9% and 77.9% respectively. Age, sex and subtotal resection did not appear to correlate with survival. Presence of neurofibromatosis reminded bad prognosis. One patient developed precocious puberty, two others developed panhypopituitarism and one posterior hypopituitarism. One patient was diagnosed as organic brain syndrome at the age of 30 and two patients had anxiety disorder. Radiotherapy proved to be an effective for tumors involving chiasma where surgery is not feasible. Long term follow-up would disclose either treatment or tumor induced sequela.

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PET-FDG UPTAKE AS A PROGNOSTIC INDICATOR IN GLIOMAS

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Positron Emission Tomography (PET) with 18-Fluorodeoxyglucose (FDG) provides quantitative and qualitative data on cerebral glucose consumption and is used in the evaluation of intracranial neoplasms. We have examined the value of PET-FDG uptake on glial tumor prognosis.

Material and Methods: PET scans of 31 patients with Grade 2–4 gliomas were evaluated prospectively on a semiquantitative scale from 0–4 according to avidity of 18-FDG uptake. Mean age of the patient group was 40.4 years, mean follow-up period was 42 months. Actuarial progression free survival was calculated as correlative endpoint.

Results: High FDG-uptake scores correlated with a worse prognosis (42% vs. 22% actuarial 5 year progression free survival, $P < 0.05$, high vs. low scores,). Age and Grade however were stronger indicators ($P < 0.001$). PET-FDG scores appeared more germane in the case of high grade tumors, indicating a better ability to discriminate the tumors with the poorest prognosis.

Conclusion: Avidity of FDG uptake in our patient group provided additional and complementary information to conventional factors such as age and grade with regard to prognosis.

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CHEMOTHERAPY FOR LOW GRADE GLIOMAS

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Complete surgical resection is the standard treatment for low grade gliomas (LGG) but it is sometimes impossible to perform. Radiation therapy has been extensively used as a complementary treatment or as the only treatment in inoperable tumors. Anyway, because of its deleterious long term effects, recent attempts have been made in order to investigate the efficacy of chemotherapy (CT) in young children and/or huge inoperable tumors. Since 1990, 35 low grade glioma patients (pts) have been treated with the SFOP BB CT protocol which includes: 7 cycles of carboplatin, procarbazine, etoposide, cisplatin, vincristin, cyclophosphamide, for 16 to 18 months. They were 16 males and 19 females aged 6 m to 104 m (median 25 m). The tumor was located in the optic pathway/hypothalamus in 22 pts, cerebral hemispheres in 3, basal