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PRETREATMENT WITH PROCARBAZINE DOES NOT CIRCUMVENT THE RESISTANCE TO NITROSOUREA IN THE TREATMENT OF RECURRENT ASTROCYTOMA

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A correlation between 06-Alkyl Transferase (06AT) activity and resistance to nitrosourea treatment has been demonstrated. The activity of O6AT is decreased by procarbazine in "*in vitro*" essay. We study the tolerance and efficacy of a monthly association of oral procarbazine 100 mg/tid (D0–D4) and fotemustine a new nitrosourea derivative at the dose of 100 mg/m^2 in 72 hrs continous infusion. A total of 31 patients (pts) (M22/F11) were enrolled and received 99 cycles. Mean age 49 yrs (21–72). Histological types were: glioblastoma (16), anaplastic astrocytoma (3), oligoastrocytoma (6) and degenerated glioma (8). PS > 90% in 10 pts. Previous radiotherapy in 30 pts. Myelosuppression has been the main toxicity observed with grade 3–4 neutropenia in 3 patients, and grade 3–4 thrombocytopenia in 6 pts. Two treatment related deaths were noticed, 1 aspergillus pneumonia and 1 toxic death (grade 4 myelosupression). Concerning the results we observed 9 PR (27%) and 12 SD (36%). Median time to progression for responders was 10 months. Median survival rate was 8 months. Pretreatment with procarbazine does not seem to increase the response rate when compared with fotermustine alone.

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ESTRAMUSTINE (EAM) INDUCES APOPTOSIS IN MALIGNANT HUMAN AND RAT GLIOMA BUT NOT IN NORMAL BRAIN TISSUE

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Background. EaM exerts a specific cytotoxicity in malignant glioma. The aim was to further characterise the effect of EaM, with special regards to the DNA damage.

Methods. A rat glioma model with BT4C cells was used. The animals were treated with EaM (20 mg/kg). Following 0.5 to 96 hrs specimens from the brain and tumour tissue were taken after a single dose (280 mg) EaM. In situ end labelling (ISEL), traditional morphology and agarosgels were used for detection of apoptotic cells.

Results. In the rat tumour tissue an increase of ISEL positive cells was seen with a peak 4–8 hrs after EaM treatment. Thereafter only a few positive cells were seen. The gel analysis supported the observations. Apoptotic cells were also seen in human glioma. In normal tissue and untreated tumour, no apoptotic cells were observed.

Conclusion. EaM induces apoptosis in malignant rat glioma and most interesting also in the clinical situation but not in normal brain tissue. The clinical and therapeutic significance of the observation need to be further studied.

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STEREOTACTIC RT (SRT) FOR INTRACRANIAL TUMOURS. PRELIMINARY EXPERIENCE IN BARCELONA

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To present our first experience in SRT, we analysed 20 patients treated by an adapted 10 MV X-Ray Linac using the stereotactic BRW head frame. Type of tumours were as follows: 10 acoustic neuromas (AN), 6 brain metastases (M1), and 4 meningiomas (MN). Mean tumour volume treated of AN, M1 and MN was 3 cc, 6.9 cc and 7.4 cc, respectively, and dose given at the isocentre with a single fraction were 19.6 Gy, 25.5 Gy and 20 Gy (reference isodose 60–80%) respectively.

With a mean follow-up of 10 m, we have observed 2 PR in AN, one CR and 3 PR in M1, and one PR in MN. As major complications we found two facial palsies 3 m later, one motor paresia recovered and one distal tremor.

Prospectively, we have started a functional study for AN consisting in audiometries, auditory evoked response measurements and electromiography, and for M1 a trial for scalating dose and the relation of complete remission with whole brain irradiation.

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TREATMENT RESULTS AND PROGNOSTIC FACTORS FOR RADIOTHERAPY OF PITUITARY ADENOMAS

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Purpose: Analysis of prognostic factors and evaluation of long-term results of pituitary adenomas radiotherapy.

Methods and Materials: The study involved 85 patients with pituitary adenomas treated with radiotherapy alone (17 pts) and post-operative radiotherapy (68 pts) in the Centre of Oncology, M. Skłodowska-Curie Memorial Institute, Gliwice, Poland, between 1980 and 1989. The median total dose was 50 Gy given 5 days a week with fraction size of 2 Gy. Univariate and multivariate analyses of 17 possible prognostic factors were performed.

Results: The 5-year actuarial survival was 95% (90.5% for the patients given radiotherapy alone and 100% for the patients treated with surgery and post-operative radiation). The 10-year actuarial survival for the group of 35 patients was 91% (100% and 71% respectively). The 5-year disease free survival was 73%. The 10-year disease free survival was 68%. The analyses of prognostic factors revealed that none of 17 possible factors significantly predict treatment outcome. No radiotherapy related complications were found in the study group.

Conclusion: Both radiotherapy alone and post-operative radiotherapy are safe and effective in the treatment of pituitary adenomas.

Psychosocial oncology

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RISK PERCEPTION AND DISTRESS AMONG WOMEN ATTENDING A BREAST CANCER FAMILY CLINIC

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One hundred and forty-nine women were assessed before and after attending the clinic to assess the impact of counselling on their perception of their risk of developing breast cancer and on their levels of anxiety and psychological distress.

Women who initially underestimated their risk (i.e. $\leqslant 0.5 \times$ counselled risk) continued to underestimate their risk ($t = 2.72$, $P = 0.01$) but to a lesser degree ($t = 4.6$, $P = 0.001$) after counselling; those who overestimated initially ($\geqslant 2 \times$ counselled risk) continued to do so ($t = 2.53$, $P = 0.02$) but to lesser extent ($t = 4.3$, $P = 0.001$) after counselling.

Changes in anxiety (A), and psychological distress (General Health Questionnaire—(GHQ)) scores varied with initial accuracy of risk estimate (A: $F = 3.89$, $P = 0.02$; GHQ: $F = 4.3$, $P = 0.02$). For overestimators anxiety and distress fell significantly immediately after counselling (A: $t = 2.48$, $P = 0.02$; GHQ: $t = 2.50$, $P = 0.02$) but returned to baseline by 3 month follow-up. Accurate estimators showed a similar response. Contrary to expectations, underestimators showed no significant increase in anxiety or GHQ scores. Although the clinic appears to increase accuracy of perception of breast cancer risk without causing distress to those who initially underestimated their risk, the reassurance it offers others appears short lived. The implications will be discussed.