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ADULT MEDULLOBLASTOMA: THE EXPERIENCE OF A SINGLE INSTITUTION

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Sixteen patients affected of adult medulloblastoma were treated between June 1978 and July 1991. There were 8 males and 8 females with a mean age of 34 yrs (r 16-61). Tumour location was as follows: cerebellar lobes in 5 p (31%), vermix in 7 p (44%), brain stem infiltrated in 3 p (19%) and bilateral tumour in 1 p (6%). The Chang staging was used. The surgical procedure was as follows: total and subtotal resection in 12 p (75%) and partial resection and biopsy in 4 p (25%). Two patients did not receive RT. In 14 p the mean dose in posterior fossa (PF was 51.2 Gy (r 42-57.4), in whole brain was 34.4 Gy (r 29-42) and in spinal cord was 32.3 Gy (29-45). CT was administrated in 3 p. 13/16 p (81%) had CR. The mean survival was 50 m. The actuarial survival at 5 yrs was 50% and at 10 yrs 40%.
The only prognostic factor in the survival was the kind of surgery but total dose in PF and stage of the tumour were not. We think the role of CT in adult medulloblastoma is still undefinied and it is necesary a multicentric trial.

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IMMUNITY IN CHILDREN WITH BRAIN TUMOR

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The authors have conducted a study of range of parameters of cellular immunity in 22 patients (pts) with brain tumor (BT) 1 - 6 years of age. Materials and methods. The blastogenic response (BR) to mitogens PHA, Con-A and PWM have been determined in 9 non-treated pts with malignant BT, 13 pts with benign BT and compared with the same parameters in 16 healthy children. BR to mitogens was assayed by method reported earlier (Kaštelan M, 1979). Results. The BR to mitogens (relative response; RR %) was significantly higher in pts with benign BT and in healthy children (control group) than in pts with malignant BT (Table). The pts with initial and permanent decreased blastogenic response to mitogens had poorer prognosis.

Mitog.	Malig. Tm			Benign Tm			Control gr		
RR %	N	x	SD	N	x	SD	N	x	SD
PHA	9	44	12	13	82	28	16	88	23
Con-A	9	45	21	13	78	17	8	76	12
PWM	9	45	18	13	63	25	10	65	4

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PRE-IRRADIATION CHEMOTHERAPY (CHT) FOR GLIOBLASTOMA (GBM) AND ANAPLASTIC ASTROCYTOMA (AA)

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Pre-irradiation CHT was given to 22 pts after surgery for GBM (91%) or AA (9%). Resection was considered total in 10 pts, subtotal in 8 and biopsy in 4. Median age was 58 yrs (16-74). Performance status-no. pts was 0-7, 1-8, 2-9 and 3-4. CHT included 2 cycles, each with procarbazine, CCNU and vincristine followed by cis-platinum and etoposide. Pts were reevaluated monthly both clinically and by CT with I.V. contrast injection. Pts with progressive disease (PD) during the 1st CHT cycle (Group A, n=11) as well as pts who during the second cycle showed either PD (n=2) or no change suggesting imminent PD (n=4)(Group B, total n=6) underwent irradiation (XRT), 56-60 Gy tumor dose. Only 5 pts (Group C, 23%), 2 after total resection and 3 with response, completed CHT before XRT. This CHT regimen had no notable toxicity. Median survival (range) was 5 months (1-12) in Group A, 8+ months (3+-16+) in Group B and 12 months (8-15) in Group C. Our results do not support further use of this regimen for GBM or AA.

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NEUROLOGIC AND NEUROPSYCHOLOGICAL SUPPORT FOR PATIENTS WITH BRAIN TUMORS

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Higher cortical functions and neurological deficits were evaluated in pts whose brain had been insulted by proliferating tumors and by consequent treatments. We report our experience with the first 6 pts who underwent this process (astrocytoma - 3, brain lymphoma - 1, brain metastases - 1, chordoma of base of cranium - 1).A neurologist made a meticulous anamnesis of functional capacities and a detailed neurological assessment, emphasizing cognitive abilities.All findings were considered in correlation to the affected areas of the brain. In 3/6 pts a neuropsychological assessment was also performed according to specific points of interest. The pts and their relatives were then instructed as to how to behave in order to compensate for the specific neurologic impairment.In addition,their medications were revised and optimized especially with regard to control of epileptic manifestations and sleep disturbances. Case reports will illustrate practical contributions of this comprehensive approach to the quality of life of brain tumor pts and their families.

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PRIMARY CNS LYMPHOMAS: CHEMOTHERAPY FOLLOWED BY RADIOTHERAPY. A PHASE II STUDY.

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Recent trials have suggested a survival improvement in PCNSL with combined Chemo-RT versus RT alone.
Also in our previously experience in 23 pts, we observed that adjuvant chemotherapy improved survival rate.
With this rationale, in April 1992 we started a phase II study.
Schedule: Surgery as extensive as possible, accurate staging to exclude other sites than cerebral and 8 day after surgery CHOD-M was performed with MTX 1 gr/m2 day 8° and 15° and reciclying day 28° for two cycles. One month after chemotherapy, radiotherapy was started (45 Gy / 25 F whole brain).
Results: 6 pts were treated; 5 male and 1 female, 5 high grade and 1 unclassified; 4 subtotal resection and 2 biopsy only.
Chemotherapy obtained 3 CR and 2 PR converted in CR by radiotherapy.
5 pts are alive without evidence of disease with a medium follow-up period of 6,8 mo. from diagnosis, 1 pts was died 2 mo. after surgery during treatment in PD.
Conclusions: Data are preliminary and must be confirmed in a more large series.

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VASCULARISATION AND NECROSIS IN HUMAN BRAIN TUMOURS AND THEIR CORRELATION TO PROLIFERATION AND ENERGY METABOLISM

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Intratumoural microenvironment determines tumour prognosis and sensitivity to therapy. Morphometrical determined vascular density, necrosis and viable cells, and cell proliferation measurements by cytometry were carried out in human brain tumours (11 glioblastomas, 9 meningeomas, 5 metastases and 5 others). Glucose metabolism was determined and correlated to the histomorphological data. Large differences were found in vascular density (> 6.3 to 28.6 vessels/mm^2, often with large extravasations, sinusoids with > 300 μm in diameter), the amount of necrosis necrosis ranged from 0 to 18 % of the tumour volume, the number of S-phase-cells between 0 to 32 %. The large differences were found within the tumours and between the tumours of the same entity. The intraindividual heterogeneity seemed to be less than the interindividual one.