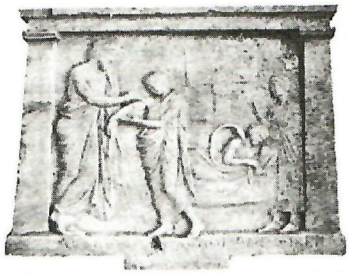
ANTICANCER RESEARCH

International Journal of Cancer Research and Treatment

ISSN: 0250-7005

Volume 16, Number 5B, September-October 1996



INTERNATIONAL INSTITUTE OF ANTICANCER RESEARCH

BRAIN TUMOUR INVASION

October 18-20, 1996,
IIAR, Kapandriti, Athens, Greece

Workshop Organized by G.J. Pilkington, Institute of Psychiatry, London, U.K.,
and Supported by the European Union
and the International Institute of Anticancer Research

ABSTRACTS

1

INTRA-ARTERIAL CHEMOTHERAPY FOR MALIGNANT GLIOMAS: BIOLOGICAL PARAMETERS AND CLINICAL OUTCOME

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Ploidy and proliferative characteristics of human brain tumors have been the subject of many studies over the years. The aim has been both to evaluate their prognostic significance and to rationalise adjuvant treatment schedules by adapting these to the biological characteristics of individual cases. This study was undertaken to verify the impact of ploidy (evaluated by DNA flow cytometry) and proliferative activity (evaluated as flow cytometric S-phase and expression of proliferating cell nuclear antigen, PCNA) with respect to the clinical outcome in a selected series of malignant neuroepithelial tumors treated in a Phase I trial with intra-arterial polichemotherapy.

The following eligibility criteria were satisfied: (a) histological diagnosis of glioblastoma; (b) gross total removal or partial removal; (c) Karnofsky performance status > 60 after surgery; (d) post-operative computed tomographic evidence of minimal residual disease. Intra-arterial chemotherapy courses were started within three weeks after surgery and every 4 weeks for a maximum of 8 courses. Etoposide (200 mg/sqm) and Carboplatin (450 mg/sqm) were administered with supraophthalmic cathetherization of internal carotid artery. Radiotherapy was started at the end of planned chemotherapy or in presence of significant recurrence of the disease; response to treatment was evaluated at each chemotherapy course with CT scan, MRI imaging and clinical parameters. Twentytwo patients entered into the study (9 males, 13 females); mean age was 54 ± 2 years; mean number of chemotherapy courses for each patient was 4.5 ± 1.2 (range (2-8). All patients were evaluable for toxicities that were mild and reversible. Considering cytokinetic parameters we observed that 9 patients (40.9 %) were aneuploid while in 13 cases a diploid DNA distribution was found. The median value of S-phase was 6.9% (range 2 - 15) while median value of PCNA positivity was 15.5 % (range 4.5-25). Mean disease free interval is 3.5 + in aneuploid cases and 5.6+ months in diploid cases; mean survival is 5.4 + months in aneuploid cases and 9.1 + months in diploid cases; a preliminary analysis shows a trend towards a correlation between survival and phase S%. If these results will be confirmed in a large series of patients, one could hypothesize that ploidy and proliferative activity may be utilized for a more rigorous case selection for intra-arterial adjuvant chemotherapy.

2

PRIMITIVE CEREBRAL LYMPHOMA IN AN EBV-POSITIVE CHILD AFFECTED BY AIDS

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Primary central nervous system (CNS) lymphoma, an otherwise rare paediatric tumor, has been reported with increasing frequency in children with acquired immunodeficiency syndrome (AIDS): The Authors describe one case of primary cerebral lymphoma in a 16 months-old infant with serological confirmation of AIDS and Epstein-Barr virus (EBV). The patient was infected congenitally by the human immunodeficiency virus (HIV). At the age of 7 months he contracted lymphocytic interstitial pneumonia, hepatopathy and serological positivity of EBV. At the age of 10 months he developed neurologic symptoms such as spastic tetraparesis and involvement of the seventh left cranial nerve, with persistent fever. Cerebral computed tomography (CT) and nuclear magnetic resonance (NMR) showed multiple nodular lesions, suggesting toxoplasmic localizations, even if serological evidence was negative. He received treatment with preventive antiviral and specific antiparasitic therapy, stopped for the appearance of cutaneous maculopapular erythema. Neurologic symptoms deteriorated swiftly and he died after repeated general convulsive crisis. Gross examination of the brain disclosed white-greyish multiple nodular lesions (right