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284. CHEMOTHERAPY TREATMENT FOR RADIATION-INDUCED FIBROSARCOMA: CASE REPORT AND REVIEW OF THE LITERATURE

Daniela A. Bota; Daniela Alexandru

INTRODUCTION: Secondary fibrosarcoma of the brain is an exceedingly rare tumor, occurring almost exclusively as a complication of therapeutic radiation to a preexisting intracranial tumor. These tumors tend to spread rapidly with extensive involvement of the optic nerves, hypothalamus, and brainstem, which makes total surgical resection impossible. Current treatment options encompass subtotal resection attempts, Glia-Site brachytherapy system, and chemotherapy with classical chemotherapy agents such as cisplatin, etoposide, and adriamycin. The results of the current therapy are disappointing, with very limited survival.

METHODS: Case report and review of the literature. **RESULTS:** We report the case of a 48-year-old man who presented with a brainstem lesion 20 years after he received radiation therapy for a pituitary tumor. A subtotal resection of the new tumor was performed. Microscopical analysis of the specimen revealed spindle cell proliferation, with areas positive for vimentin. We chose to treat the patient with cyclophosphamide and imatinib chemotherapy, which the patient tolerated with no side effects. He was followed clinically and with serial imaging over a period of 6 months. During this time his disease was stable. The review of the literature shows that radiation-induced fibrosarcoma of the brain appears after a latency period of 2.5–20 years. Surgical treatment is very limited, especially when the tumor is in highly eloquent areas. We found only four case reports of using chemotherapy for the treatment of secondary fibrosarcomas of the brain. The progression-free survival of the patients described in these case reports were similar to the one described by us. However, the drugs previously used had potentially more side effects and impact on the patient's quality of life. **CONCLUSION:** Postradiation treatment of fibrosarcoma is not well defined, and this severely impacts patient prognosis. New research on the molecular pathology of radiation-induced brain fibrosarcoma and more targeted therapies are currently needed.