Glioblastoma multiforme – a histological diagnosis

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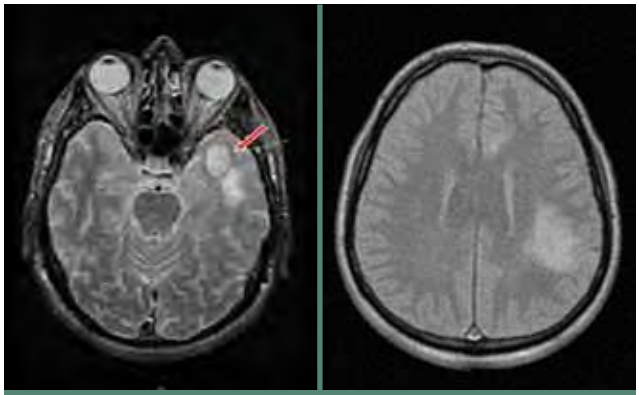
Male patient, Caucasian, 58 years, admitted with migraines, dizziness, behavioral alterations, episodes and amnesia, with two months of evolution. Patient had generalized convulsions one month previously. Family history of type 2 diabetes, high blood pressure and myocardial infarction. No alcohol drinking or smoking habits. Works as a manual worker for an oil company in Angola. Objective examination showed no alterations of note. CE-CT carried out, showing two intra-axial regions in the left hemisphere, located in the temporal and parietal lobes, with vasogenic edema, suggestive of metastases. MRI of the brain supported this hypothesis *(Fig.1)*. A complementary study to rule out the neoplasias that most commonly metastise to the encephalic tissue (lung, melanoma, digestive tract, thyroid and testicle) was negative. It was therefore decided to perform stereotaxic biopsy of the lesions. The histological exam showed that it was a case of grade IV astrocytoma (Fig. 2). The patient was submitted to surgical exeresis, and referred for chemotherapy and radiography. He died five months after the diagnosis.

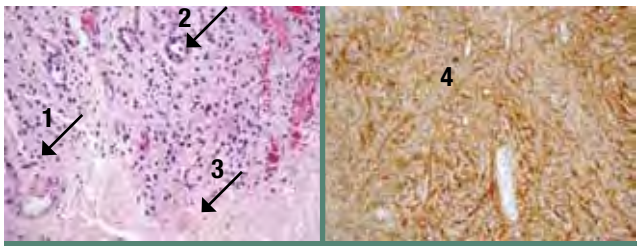
Although primary brain tumors are uncommon (2% of all neoplasias), their incidence has increased in the last 50 years,[1] contrary to the survival rate, which has altered very little, despite medical progress. Multiform glioblastoma (grade IV astrocytoma) is responsible for 50% of cases, being more common among males and persons aged over 50 years.[1] Although genetic factors and environmental carcinogens (contact with electrical materials and petroleum derivatives, as in our case) have been described as predisposing factors for the appearance of gliomas, only ionizing radiation is unequivocally associated with a higher risk.[3] The form of presentation is variable, and is related to the location, size, and presence of edema; it includes focal or generalized neurological symptoms.

The results of imaging exams are characterized by an irregular central lesion with a peripheral ring, with or without cerebral edema *(Fig.1)*, magnetic resonance being the method of choice.[4] As in this case, the definitive diagnosis can only be confirmed histologically: Pseudopalisading necrosis, increased cellularity, pleomorphism and vascular proliferation [3] *(Fig.2)*. ■



Images of the CE-MRI.

FIG. 1



Cells with atypical nuclei (1), vascular proliferation (2) and necrosis (3) (hematoxylin/eosin stains). Immunopositivity for glial fibrillary acidic protein (GFAP-4).

FIG. 2

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