ACUTE ONSET HEMIPARKINSONISM AS FIRST MANIFESTATION OF BRAIN TUMOR

Alba Cárcamo[1,2], Alex R. Jaimes[2], Maite Blasco[2,3], Cici Feliz[2]

[1]Hospital Universitario Fundación Alcorcón, Alcorcón, Madrid
[2]Hospital Universitario Fundación Jiménez Díaz, Madrid
[3]Hospital Nuestra Señora del Rosario, Madrid

INTRODUCTION There are a variety of conditions that can cause an acute onset parkinsonism, including structural lesions, mainly strokes involving basal ganglia. Brain tumors are a very rare cause of secondary parkinsonism

CASE PRESENTATION A 73-year-old, left-handed woman with no significant past medical history, presented with two weeks progressive left hand clumsiness and asthenia. She referred difficulties when brushing her teeth, combing her hair and beating eggs. She had also noticed that her handwriting had become smaller recently. She denied limb weakness or pain. She was not taking any medications that could explain these symptoms. Neurological examination revealed a left hemiparkinsonism, with hypokinesia at finger and foot tapping, micrographia and reduced left arm swing when walking. She had a mild left hand action tremor and moderate cogwheel rigidity, but no resting tremor was noticeable. Postural reflexes were normal. Muscle strength was preserved and no pyramidalism signs were appreciated. She had a normal mental status and no disturbances where found in cranial nerves, cerebellum and sensory examination. Neuroimages exams (Fig. 1, 2 and 3) showed a right frontal lobe intra-axial lesion with extension to the corpus callosum that suggested a high-grade glioma

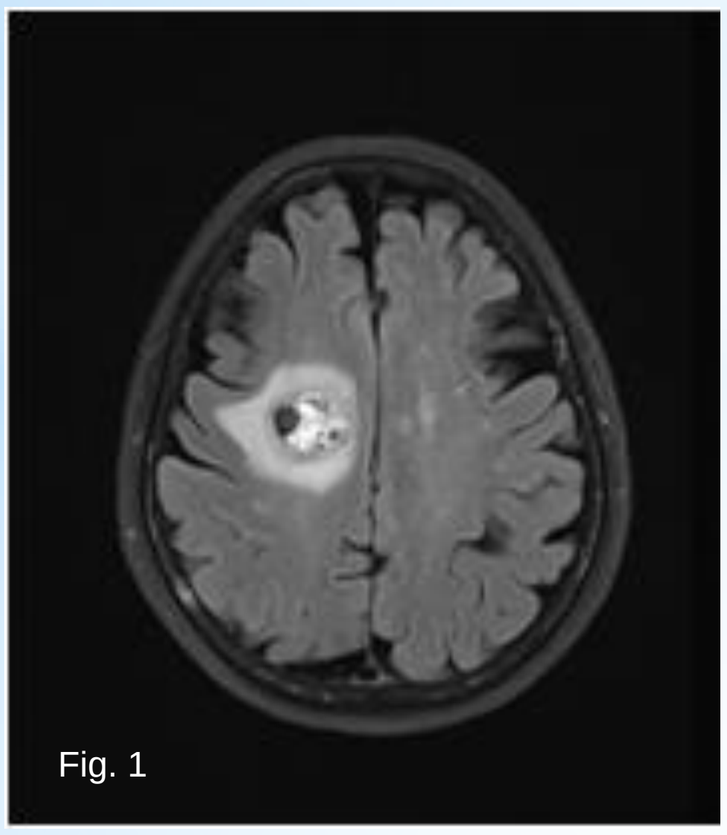
Fig. 1

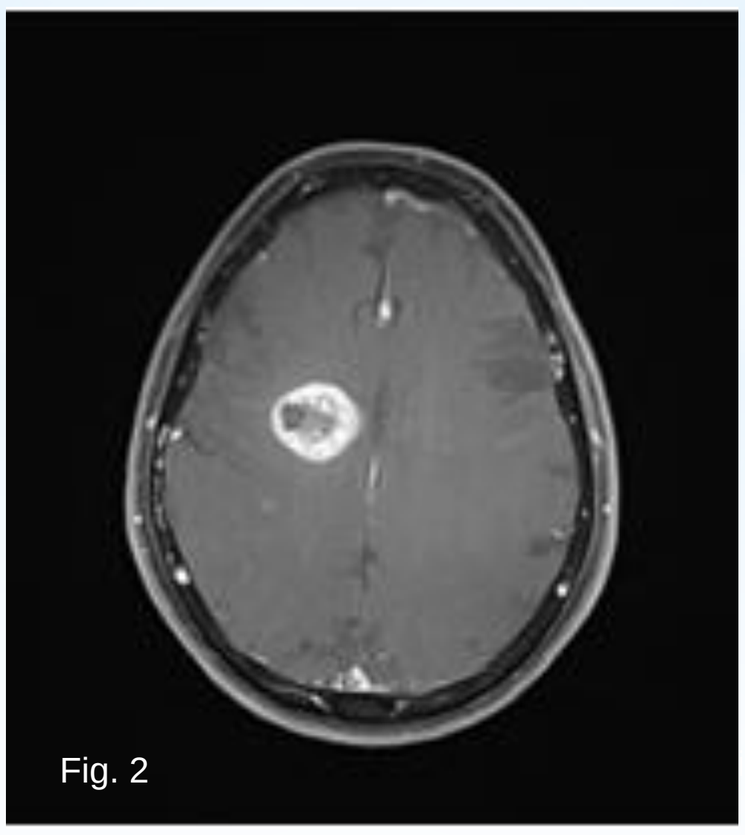
Fig. 2

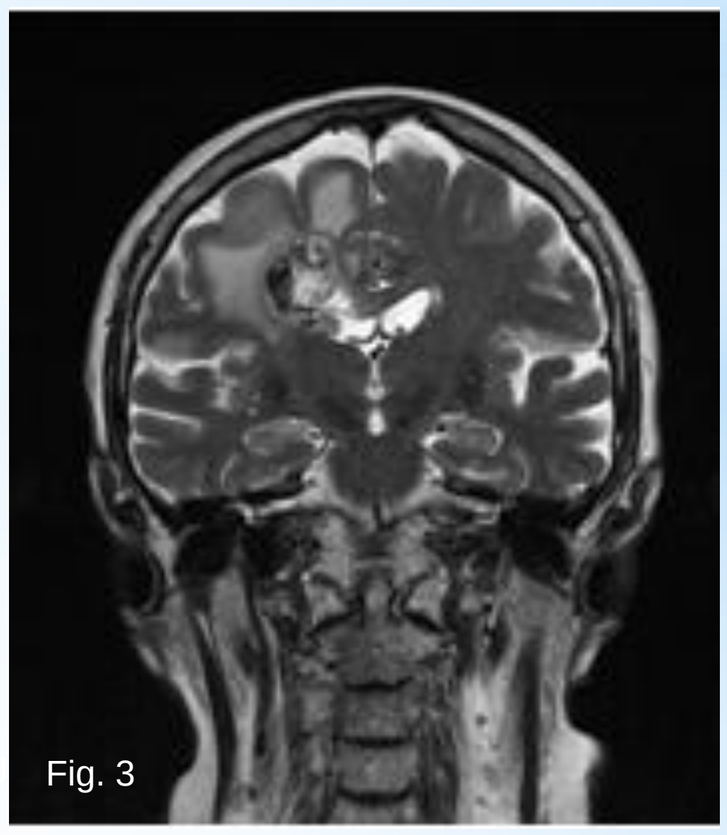
Fig. 3

MRI: axial T2-FLAIR (Fig. 1), post-contrast axial T1 (Fig 2.), coronal T2 (Fig. 3): right frontal lobe intra-axial lesion that extends to corpus callosum and caudate nucleus head. Shows central heterogeneous signal (necrotic areas and hemorrhagic changes), peripheral contrast enhancement and surrounding vasogenic oedema. These findings suggest a high-grade glioma tumor as first possibility.

DISCUSSION Brain tumors usually present with headache, seizures or focal neurological deficits like speech, visual, sensitive disturbances or limb weakness. A few cases of parkinsonism as isolated manifestation of brain tumors have been described, most of them -but not only- involving the basal ganglia. Postulated mechanisms include: compression of the basal ganglia, neuronal loss in the substantia nigra, midbrain compromise or damage of the connections with supplementary motor areas. Moreover, some epidemiological studies have suggested a positive association between Parkinson's disease and brain tumors, so both neoplastic and neurodegenerative conditions could coexist in the same patient

CONCLUSION Acute onset parkinsonism may be the first manifestation of brain tumors affecting different locations