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Case report

Unusual MRI findings in a patient with history of frontal fracture and skin infestation by fly larvae, as a possible sign of intracerebral myiasis

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Abstract

We report a case of an 11-year-old columbian immigrant with mild non-specific cephalalgia. He had a previous history of frontal fracture and skin infestation caused by *Dermatobia hominis* larvae. MRI performed revealed multiple subependymal and intraventricular lesions with concentric blooming artifacts and moderate hydrocephalus. Based on his previous history, intracerebral myiasis diagnosis was suggested. His mother denied any kind of diagnostic surgery or treatment. To the best of our knowledge, this is the first MRI report of a possible intracerebral myiasis, an exceedingly rare entity.

Keywords: Brain; Myiasis; Larvae; Magnetic resonance imaging; Blooming artefacts

1. Introduction

Myiasis is an animal or human disease caused by parasitic dipterous fly larvae feeding on the host's necrotic or living tissue [1]. *Dermatobia hominis* is the most common cause of furuncular myiasis in Central and South America. Cutaneous examination coupled with a history of travel to endemic regions usually confirms the diagnosis [2].

We describe the case of a child (immigrant from Colombia) with frequent headaches. MRI showed multiple cerebral lesions which were suspected to be cerebral myiasis given the history of frontal skull fracture and subsequent foruncular myiasis in the wound. His mother denied any kind of diagnostic surgery or treatment. Even when pathologic diagnosis could not be performed, we report this outstanding case in order to provide the first MR imaging description of a possible cerebral myiasis.

2. Case report

An 11-year-old boy immigrant from Colombia presented with a 2-year history of non-specific headaches and learning disabilities. Complete neurologic examination was normal. No alterations were observed in main laboratory findings including absence of hypereosinophilia.

When he was 3 years old, living in Colombia, had a right frontal skull fracture and 3 days later he suffered inflammation and pain in the healing wound. Local excision was performed and *D. hominis* larvae were removed from the frontal wound in the scalp with subsequent satisfactory evolution and no clinical sequelae. Despite some doubtful references in the clinical history and the report of the mother about possible larvae excision within the right frontal lobe – which would mean a definitive confirmation of cerebral

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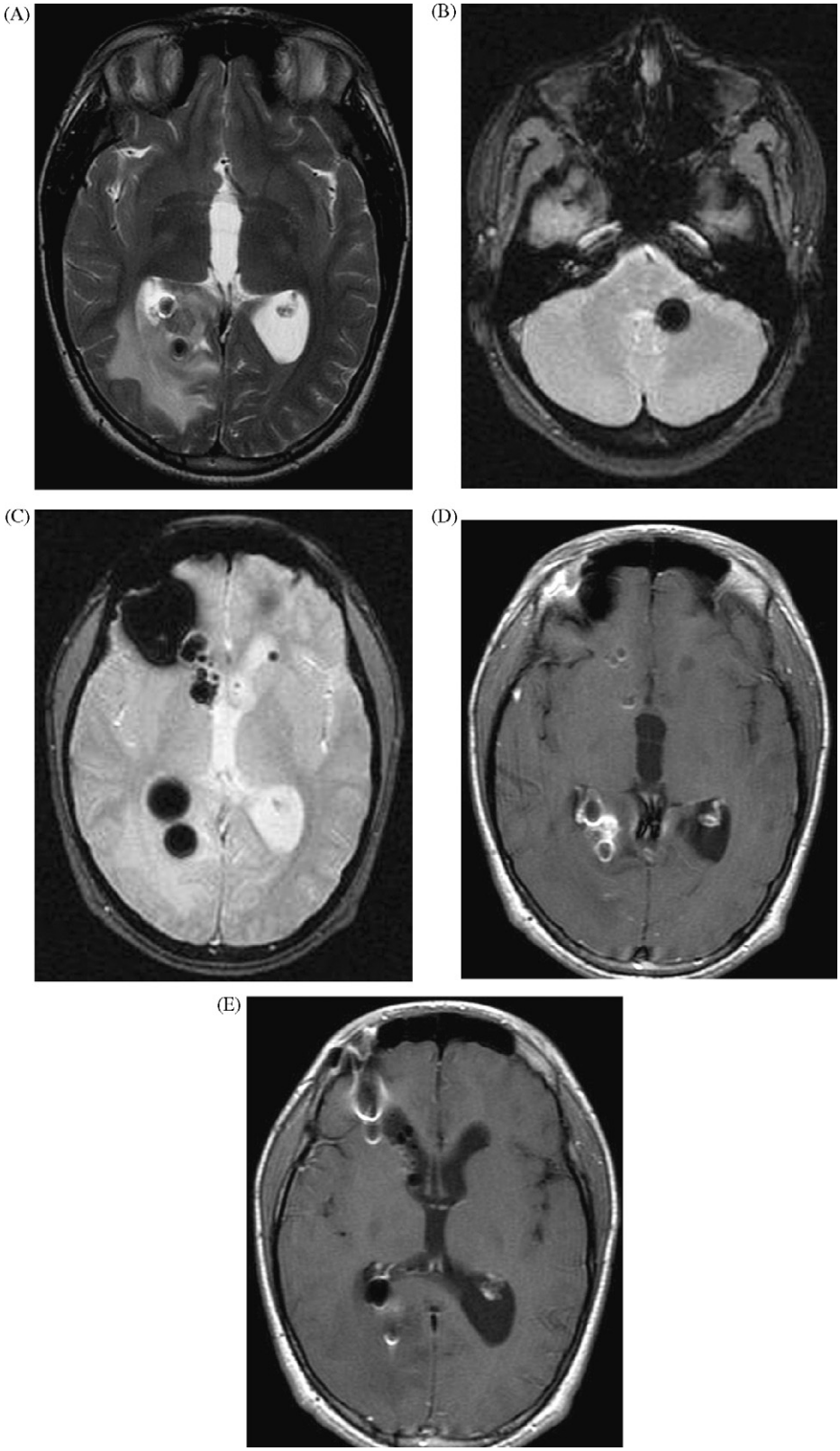

Fig. 1. (A) Axial T2 weighted-image shows one subependymal hyperintense lesion between other two dark round periatrial nodules with surrounding vasogenic edema in the occipital lobe. (B and C) Axial T2* weighted images show several dark lesions with concentric outstanding artifacts located subependymal next to the fourth ventricle. (C) Shows multiple similar lesions located in right atrium and both frontal ventricle horns, especially in the right side. (D and E) Axial T1 +C image shows concentric hyper and hypointense artifacts in the same lesions with only one enhancing nodule in right atrium.