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PSYCHOGERIATRIC NOTE

Delirium as the primary manifestation of glioblastoma multiforme: a report of two cases

Delirium is a neuropsychiatric syndrome of acute/subacute onset and fluctuating course characterized by altered attention and awareness which represents a change from the patient's baseline cognitive functioning. Impairment in multiple cognitive domains, behavioural and emotional changes, perceptual disturbance and disrupted sleep–wake cycle are additional symptoms. This syndrome is frequent among hospitalized older people with an estimated prevalence of 25% and an incidence of 20%–29%.[1] Cancer patients are particularly vulnerable to suffer from delirium with reported rates ranging from 57% to 85%.[2] At the emergency room delirium is diagnosed in 8%–17% of the total amount of admissions and it was associated with a 70% increased risk of sixth-month mortality after the diagnosis.[1] Glioblastoma multiforme (GBM) is a grade IV neoplasia of astrocytic differentiation associated with poor outcomes and high mortality rates. Despite representing more than 60% of the whole primary brain tumours, it remains a rare condition with an estimated incidence of 3.19 per 10 000.[3] GBM usually manifests with neurological symptoms and delirium has been reported with previously diagnosed GBM.[4,5] Here we report two cases in which delirium was the first presenting feature of GBM.

In the first case, a previously healthy 82-year-old Caucasian female was observed with fatigue, irritability, insomnia and anorexia for 3–4 weeks. She was the principal caregiver of her husband (who had moderate dementia) and during the last years she remained very supportive, being able to manage all the domestic activities, providing him the medication and supervising his behaviour. The daughter reported that her mother had increasing signs of caregiver burnout and she was particularly concerned as during the last week she had fluctuating episodes of disorganized speech and disorientation (detected during phone calls). The clinical examination (including the mental examination and a brief neurological examination) was unremarkable apart from mild psychomotor retardation and deficit in sustained attention.

In the second case, a 72-year-old Caucasian female with a history of recurrent depressive episodes (since adolescence) who had been stable for several years was brought to the emergency psychiatric room in a state of abulia, social isolation and negativism for the previous 3 weeks. For unknown reasons, she had stopped the psychiatric medication (venlafaxine 75 mg once daily and diazepam 5 mg once daily) 1 week before the symptoms became apparent. With family supervision she restarted the correct posology during the following weeks but her clinical condition did not improve. At admission she presented with a perplexed posture, could not follow the interview due to severe inattention and responded with a low output and whispered disorganized speech. Both patients underwent a routine workup (blood count, biochemistry, urine analysis, electrocardiogram) which was unremarkable. A brain computed tomography (CT) scan was subsequently ordered to clarify the cause of the acute changes in mental state. In both cases a voluminous frontal lesion was detected (Fig. 1). The patients were referred to neurosurgery and following removal of the lesions the definite anatomical-pathological diagnosis was GBM. In these two cases delirium was the clinical presentation of an underlying rare brain disorder which could only be identified with a neuroimaging exam. However, although delirium is a manifestation of acute brain dysfunction in most patients there is no identifiable primary involvement of the brain. Therefore, in daily practice most patients presenting with delirium are routinely tested with blood and urine analysis to identify the most common causes underlying this syndrome (e.g. systemic infection, electrolyte imbalance, endocrine changes). In contrast, the use of neuroimaging exams (CT or magnetic

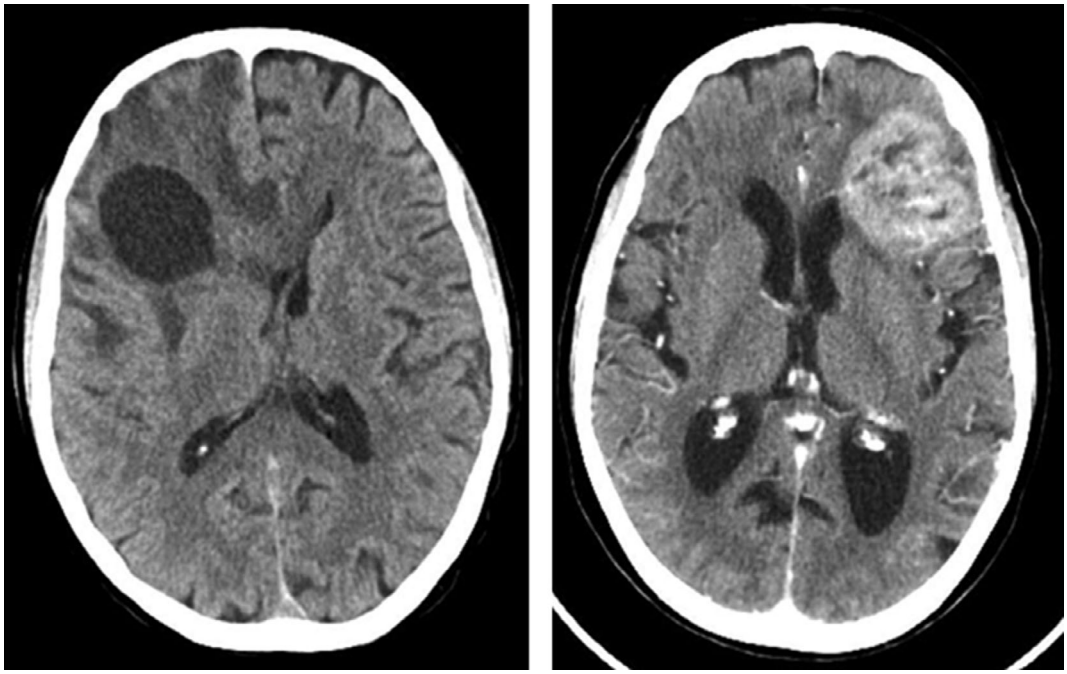

Figure 1 Brain computed tomography scans. Left, patient 1. Right, patient 2.

resonance imaging scan) has not been recommended in the workup of delirium in the absence of focal neurological signs as in about 93% of cases this exam is unremarkable.[6] Currently, the role of neuroimaging studies in the assessment of delirium workup is restricted to some particular situations, such as in patients presenting with focal neurological signs or presumed intracranial process, when there is a history of head injury and in refractory and persistent delirium.[7] Our cases show that delirium can be caused by rare but serious conditions which can be easily missed, particularly when the symptoms are too unspecific to guide the investigation. We ordered a CT scan because both patients had no history of previous dementia, were presenting with a first delirium episode and the initial routine workup for common causes of delirium was negative. However, this decision was largely based on the so-called clinical "gut feeling" rather than in diagnostic algorithms derived from robust epidemiological data.

Therefore, we emphasize the need for a high index of suspicion in the diagnostic approach of patients with delirium, particularly in those presenting with a first episode and with no previous dementia, to detect rare but potentially serious medical conditions.

CONFLICTING INTERESTS

None declared.

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