



Cytotoxic lesion of the corpus callosum: an atypical post-infectious neurologic syndrome

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Introduction

Cytotoxic lesions of the corpus callosum (CLOCCs) are secondary lesions associated with various entities. CLOCCs have been found in association with various pharmacological therapies, malignancy, infections, subarachnoid hemorrhage, metabolic disorders, trauma and other entities. Post-Infectious Neurologic Syndromes (PINSs) include heterogeneous, sometimes relapsing, disorders of the Central Nervous System (CNS). We describe the case of a patient who, following acute bronchitis, manifested *delirium* associated with the radiological evidence of a CLOCC.

Presentation and history

A 73-year-old man came to our observation for acute confusional state, ataxia and pain in lower limbs a few days after an episode of bronchitis. His past medical history was considerable for a previous legionellosis and chronic obstructive pulmonary disease. The patient was admitted to our Department for a full clinical and instrumental assessment.

Neurological examination

Ataxic gait, areflexia and a confused state with complex visual hallucinations and automatic movements of upper limbs

Electrophysiological testing

ENMG: no signs of neuropathy

EEG: slowing of cerebral activity with characteristics of encephalopathy

CSF analysis

Physical: clear and colorless

Glucose: normal

Protein: 107 mg/dl (20-50)

Cell count: 4 cells/ μ l (0-3)

Blood test

➤ **WBC** 14.710/ml (80% neutrophils)

➤ **CRP** 0.77 mg/dl

➤ **ESR** 70 mm/h

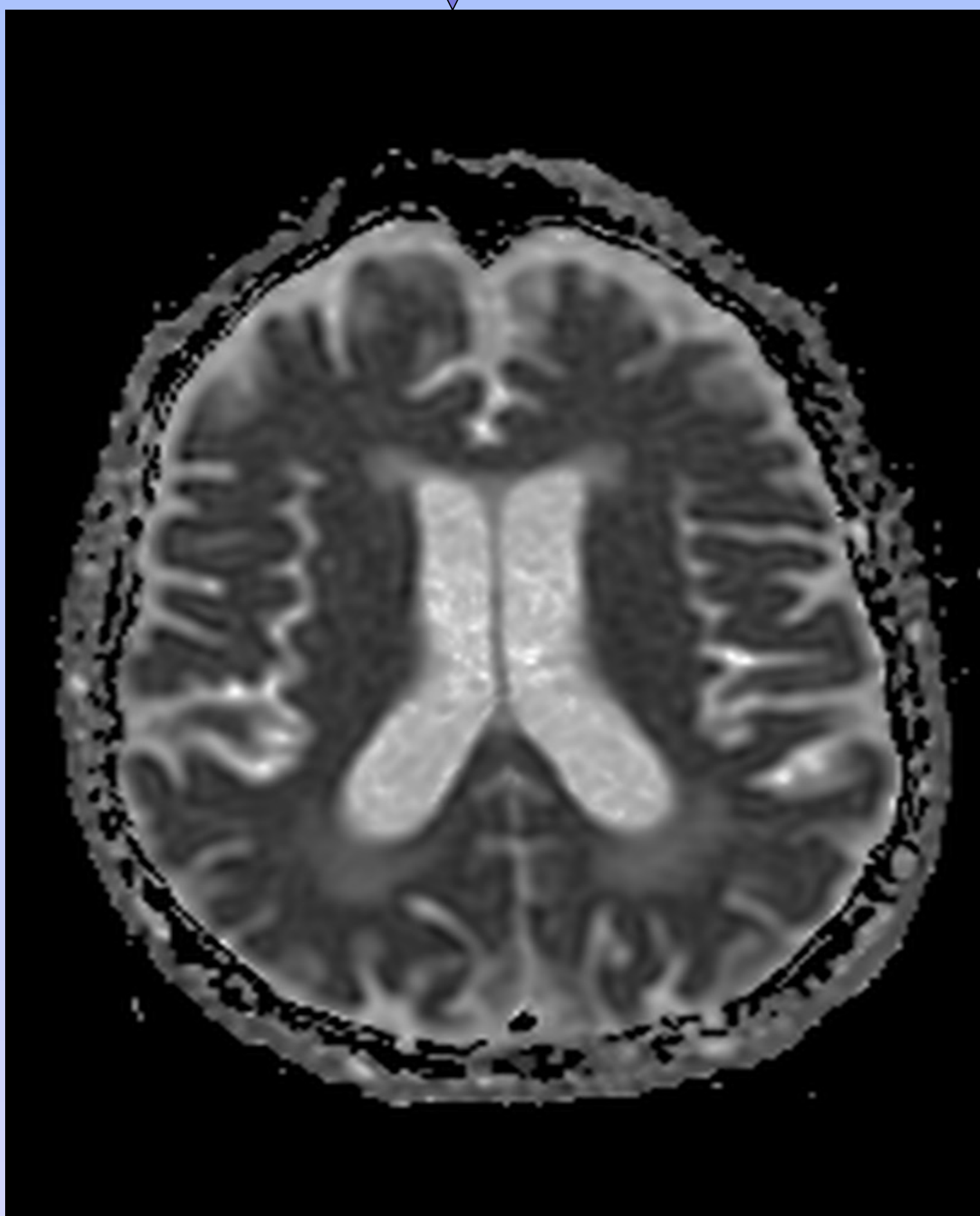
➤ **Sodium** 130 mmol/l

Other tests

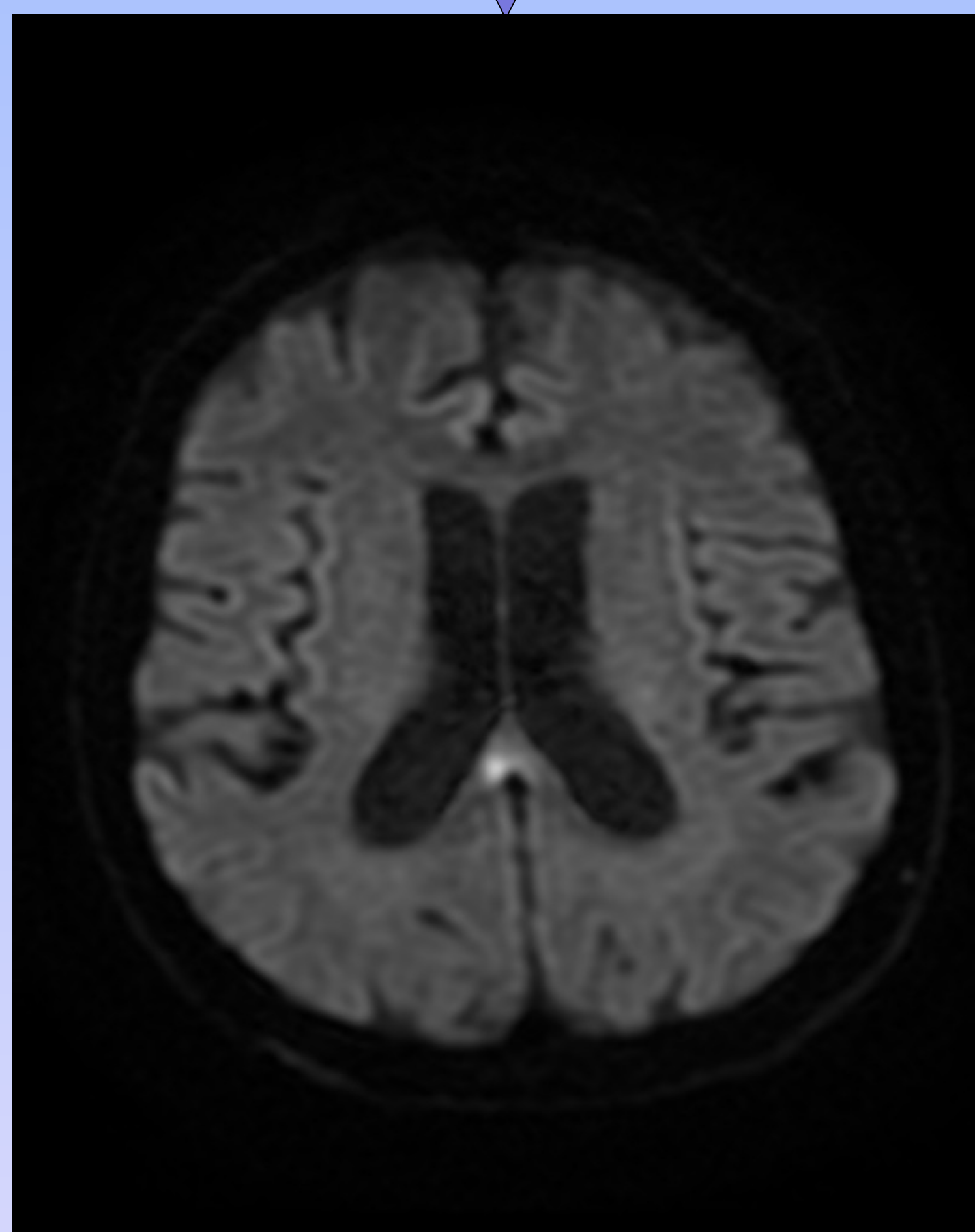
- Legionella urinary antigen: negative
- Rapid multiplex PCR assay in nasopharyngeal swabs: positivity for *Haemophilus influenzae*
- Chest CT: residues of a recent basal right bronchitis

MRI Brain

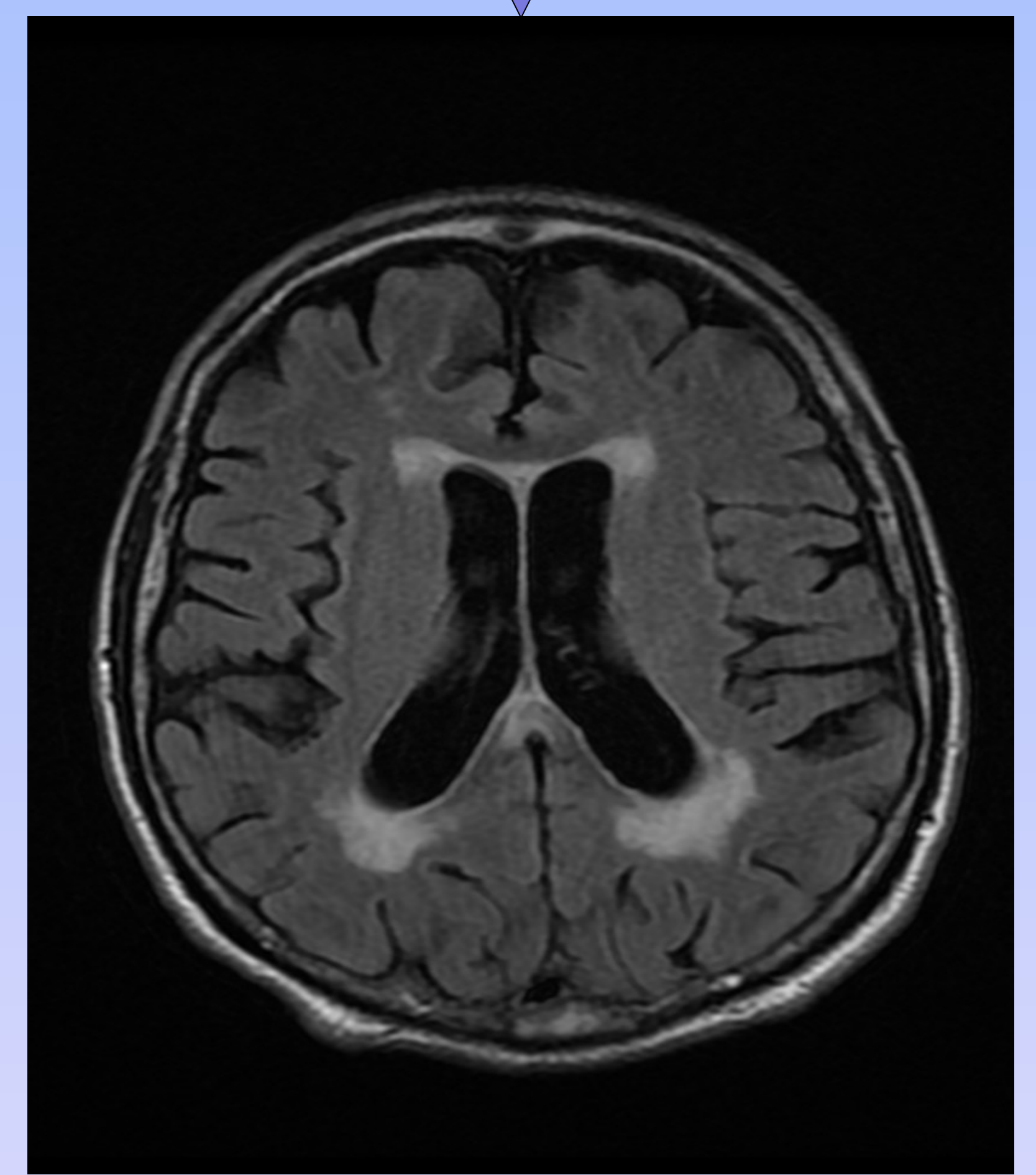
High-signal lesion in the splenium of corpus callosum, compatible with CLOCC.



ADC



DWI-b1000



T2-FLAIR

Follow up

The patient was treated with Immunoglobulin therapy for 5 days and levofloxacin for 14 days with complete remission of symptoms and laboratory findings. Brain MRI performed 3 months later showed a significant size reduction of the lesion of the corpus callosum.

Discussion & Conclusions

The spectrum of PINSs is becoming increasingly recognized as heterogeneous, with clinical entities spanning from diffuse CNS involvement (such as Acute Disseminated Encephalomyelitis) to more focal syndromes. We report the case of an acute encephalopathy associated with the finding of CLOCC in a patient with residues of recent bronchitis and mild hyponatremia. We highlight that CLOCCs, which can be secondary to multiple, often coexisting causes, should be also included among PINSs and are not completely reversible in every case, despite a satisfying clinical recovery.

Bibliography

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