

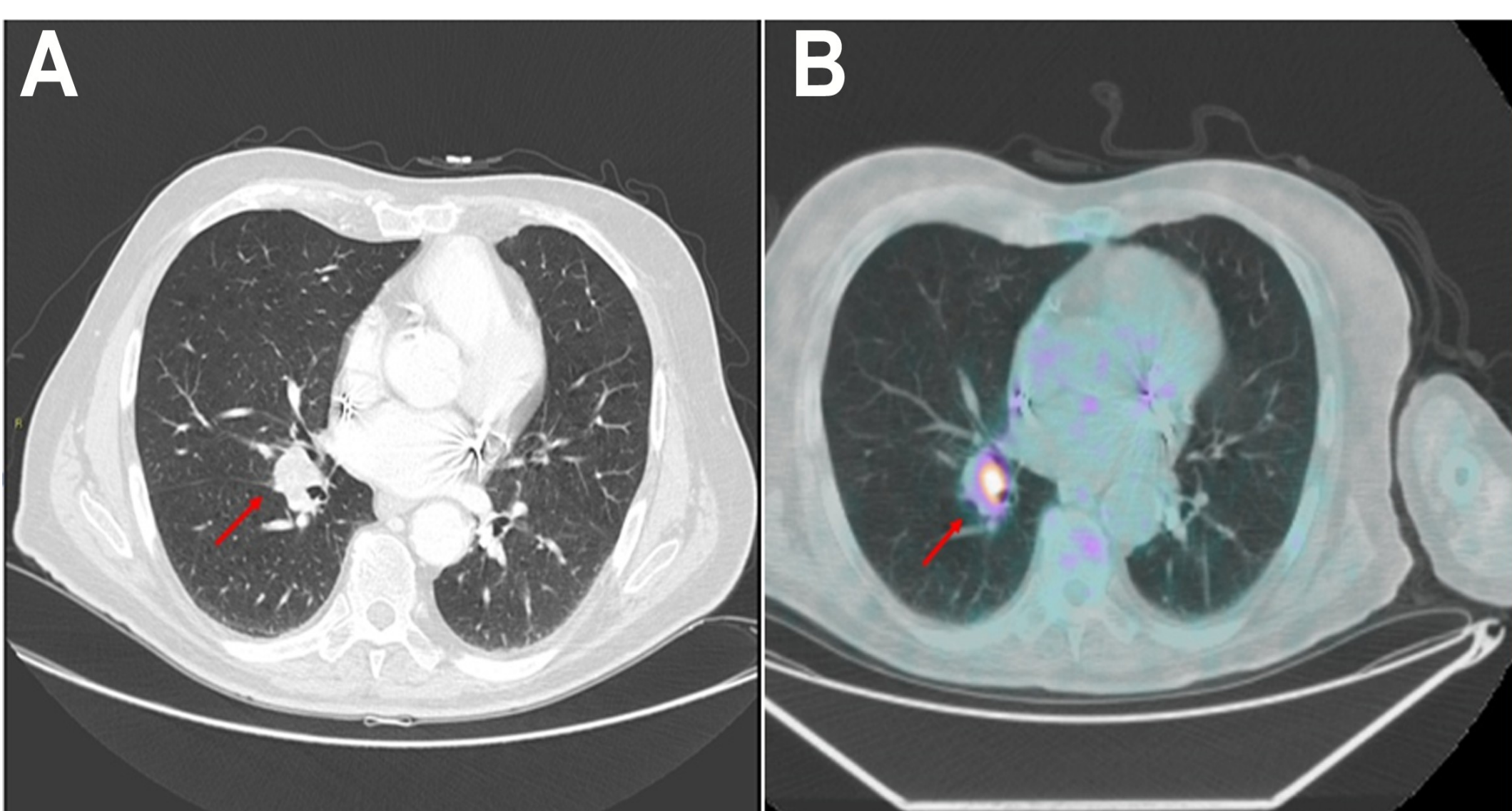
**Introduction:** Type 1 Narcolepsy (NT1) is a central hypersomnia due to an immune hypotalamic hypocretin neurons destruction. Rarely, NT1 has been reported in the context of paraneoplastic encephalitis.

**Objective:** The case at issue reports for the first time a patient with secondary narcolepsy associated with anti-Hu antibodies.

**Patients:** An 85-year-old man presented with an abrupt onset of transient psychosis that resolved spontaneously after two days. Soon after appeared a rapidly worsening generalized muscular weakness, brief and frequent episodes of facial grimaces, ptosis and slurred speech, with preserved consciousness, triggered by emotions, excessive daytime sleepiness and disrupted nocturnal sleep by awakenings, associated to vivid dream activity. Neurological examination revealed subcontinuous fluctuations in muscle tone with ptosis, facial grimaces and muscle sagging of upper limbs.

**Methods and results:** Neurophysiological tests (24-hour video-polysomnography and MSLT) and presence of cataplexy led to a diagnosis of Narcolepsy type 1 (NT1). (**Fig. 1**) Search for HLA DQB1\*0602 antigen was negative and CSF hcrt-1 assay disclosed an intermediate level of 146,83 pg/mL.

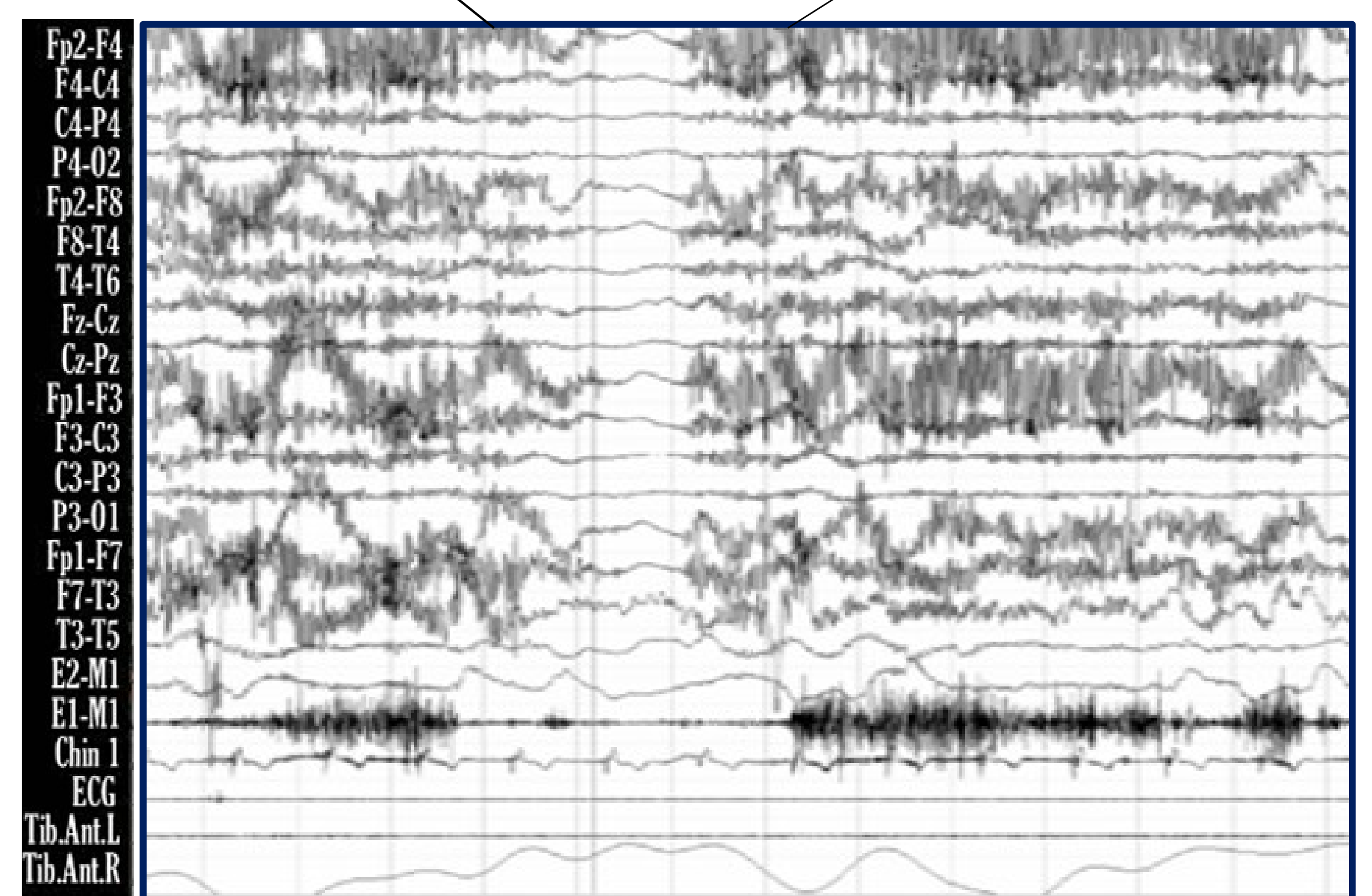
Due to the atypical age of onset, to the peculiar clinical features, to the "HLA negativity" and to intermediate CSF hcrt-1 levels the patient was further investigated. Serological and biochemical analyses disclosed positivity for anti-neuronal nuclear antibody, type 1, ANNA 1 (anti Hu). Total body CT and fluorodeoxyglucose positron emission tomography scans showed a nodular hilar-perihilar lung formation, with features characteristic of malignancy. (**Fig.2**)



**Fig 2. (A)** Chest TC shows a nodular formation, densitometrically inhomogeneous, in the hilar-perihilar region of right lung with hyperfixation in the same region on a whole-body fluorodeoxyglucose positron emission (B).

**Conclusions:** diagnosis of secondary NT1 related to anti-Hu antibodies and neoplasm of lung was made.

The list of anti-Hu antibodies associated paraneoplastic neurological syndromes, already encompassing encephalitis, brainstem encephalopathy, opsoclonus-myoclonus, paraneoplastic cerebellar degeneration, myelopathy and peripheral neuropathy, should be enriched also by narcolepsy with cataplexy.



**Fig. 1** Cataplectic attack while under synchronized video-polygraphic recording: EEG disclosed a wake activity and the EMG tracings disclosed intermittent loss of tone over the EMG leads, confirming the suspicion of cataplexy.

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