

A CURIOUS CASE OF ENCEPHALITIS IN ADVANCED HIV INFECTION

Authors:

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A 71-year-old gentleman was admitted to a local hospital with a two-month history of progressive cognitive and functional decline, weakness and headache, culminating in aphasia, then obtundation requiring intubation. This was on a background of newly diagnosed advanced HIV infection [CD4+ T-cell count 8 cells/ μ L (2%), HIV viral load 10 000 copies/ml]. Relevant background included chronic myeloid leukemia from 2022 on Imatinib and ischaemic heart disease.

Magnetic Resonance Imaging of the brain performed at initial presentation revealed hyperintense lesions in the left periventricular region and right posterior medulla. Subsequent serial imaging revealed marked deterioration in white matter lesions, new enhancement and diffusion restriction with minor mass effect. Serial Cerebrospinal Fluid analysis demonstrated moderate lymphocytosis and monocytosis, with no cytological features of malignancy. Epstein-Barr virus PCR was positive in 2/4 samples, but investigation for other viral, bacterial and fungal pathogens was negative.

Differential diagnoses included cerebral lymphoma and tuberculosis (TB). Empiric TB therapy and dexamethasone were commenced and discontinued after four weeks when the TB cultures were reported negative. Four weeks after presentation he commenced tenofovir alafenamide/emtricitabine/bictegravir.

He was transferred to the Alfred seven weeks into his local admission for investigation of persistent bilateral periventricular and corpus callosum cerebral lesions with altered conscious state. A right frontal brain biopsy was performed revealing florid T lymphocytic and macrophage infiltration of brain parenchyma, consisting almost uniformly of CD8+ T lymphocytes. A provisional diagnosis of HIV CD8+ encephalitis was made. Intravenous methylprednisolone 1g was instituted for five days, followed by oral prednisolone, 50mg daily weaned by 5mg weekly.

Over the subsequent weeks an improvement in his cognitive state and functional capacity was observed. His aphasia and comprehension improved and he was able to converse in short sentences. He remained profoundly weak and was transferred back for rehabilitation locally. He died 6 weeks later.