PRACTICE BASED TEMPLATE

Submissions must not exceed 300 words (excluding title & authors). The document **must not** be password protected or saved as read only as this may result in your abstract failing to upload successfully. Use Arial 12 point type only. Please structure your submission using the subheadings below. If the abstract does not fit the headings, please put full abstract beneath introduction and we will remove the headings once submitted.

When treatment Becomes the Threat: Paradoxical TB-IRIS in Advanced HIV

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Background/Purpose:

A 45-year-old man from Philippines was diagnosed advanced HIV with a viral load (VL) of 1,190,000 copies/ml and CD4 count of <35 cells/microL (6%). On presentation, miliary tuberculosis (TB) was diagnosed, and he was commenced on rifampicin, isoniazid, pyrazinamide, and ethambutol. Issues with cognition and speech lead to the finding of a left middle cerebral artery stroke on magnetic resonance imaging (MRI) of the brain, with features consistent with TB vasculitis. Dexamethasone was added to his TB therapy. He did not have a lumbar puncture due to anticoagulation. After 19 days TB therapy, he started antiretroviral treatment with tenofovir alafenamide, emtricitabine and bictegravir.

Two months later, after weaning steroids, he re-presented with headaches and worsening cognition. MRI brain was concerning for TB meningitis. Lumbar puncture revealed 150×10^6 polymorphs, and 38×10^6 mononuclear cells, protein 2.26g/L, glucose 1.2mmol/L. Gram stain, and bacterial culture, including for TB, was negative on cerebrospinal fluid (CSF) but a TB polymerase chain reaction (PCR) could not be performed. CSF cytomegalovirus (CMV) PCR was also positive plasma CMV VL of 14,000. Corticosteroid therapy was reinstituted, with ganciclovir for suspected CMV encephalitis. After slow improvement, he was transferred with continuing cognitive issues and functional decline to neurorehabilitation. As corticosteroids were weaned, he developed new headaches and gait disturbance, and imaging demonstrated new bilateral strokes. A clinical diagnosis of TB-IRIS was made, and steroids were re-introduced. Brain biopsy demonstrated lymphocytic infiltrate but no evidence of active TB or CMV infection. Infliximab was given as a steroid-sparing agent. He was ultimately discharged to supported residential accommodation, and completed 12 months of TB therapy.

Approach:

Outcomes/Impact:

Innovation and Significance:

This case highlights the challenges of managing TB-IRIS and concurrent opportunistic infections in people with advanced HIV. A focus of discussion will be disseminated TB management in PWH and the role of steroid-sparing agents for IRIS.

Disclosure of Interest Statement: None

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