Neurology, virology meets MAC

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Background:
AB is a middle-aged male with complicated mycobacterium avium (MAC) infection in the setting of human immunodeficiency virus (HIV), the management of both of which has been plagued by non-compliance. AB was diagnosed with HIV in 2012, with a nadir CD4+ count of 12 x 10^6/L. Shortly after commencing anti-retroviral therapy, AB developed immune reconstitution syndrome (IRIS). Testing of his cerebrospinal fluid confirmed JC virus suggesting a diagnosis of progressive multifocal leukoencephalopathy (PML). Initial management included steroid therapy, however AB has had mild long term cognitive impairment as a result of PML-IRIS. Over the years, AB's HIV disease course has been characterised by virological failure, secondary to non-compliance due to memory impairment. Despite this viral resistance has not been detected. AB's CD4+ count and viral load has been variable throughout this time period, with long standing CD4+ count below 150 x 10^6/L and persisting low levels of viraemia. Current therapy includes dolutegravir, abacavir, lamivudine, darunavir, ritonavir, as well as co-trimoxazole prophylaxis.

In mid-2016, a routine chest x-ray was suspicious for an upper lobe cavity. Subsequent computed tomography scans confirmed multiple right upper lobe nodules, bronchiectasis and mediastinal nodes. AB was asymptomatic at the time. Diagnostic investigations were all negative with initial sputum smear also negative for acid-fast bacilli. Cultures of his sputum confirmed MAC. Therapy was commenced with rifabutin, azithromycin and ethambutol, again with variable compliance. Despite sputum clearance at two months, there was radiological progression at twelve months. AB also had a restrictive pattern on pulmonary function testing. Therapy was ceased after 18 months with AB remaining asymptomatic. AB remains well but will require further investigations given ongoing radiological progression.

This case will briefly discuss PML-IRIS and the complexities of managing neurological manifestations of HIV before discussing the difficulties of managing MAC in patients with HIV.

Disclosure of Interest Statement:
There are no disclosures for this presentation