A PATIENT WITH HUMAN T LEUKAEMIA VIRUS SUBTYPE 1 (HTLV-1) ASSOCIATED LEUKAEMIA/LYMPHOMA AND INVASIVE ASPERGILLOSIS

Authors:
CAROLINE BARTOLO[1], LYN-LI LIM[1,2]

[1]Box Hill Hospital, Eastern Health, Melbourne, Australia, [2]Monash University, Melbourne, Australia

Background:
Human T Leukaemia Virus Subtype 1 (HTLV-1) is endemic in Indigenous Australians but uncommon in non-Indigenous Australians. In some carriers it can cause leukaemia/lymphoma however there are no standard treatment options and outcomes are poor.

Case:
A 57 year old Australian-born Caucasian woman presenting with weight loss and headaches was diagnosed with T cell leukaemia/lymphoma. Baseline investigations identified that she was HTLV-1 positive (viral load 1,274,070 copies/million Peripheral Blood Mononuclear Cells Log 10) despite no clear epidemiological risk factors (non-Indigenous, no travel to endemic areas, blood transfusions, intravenous drug use or sexual contact with at-risk individuals). MRI of the head showed changes consistent with left sphenoid sinusitis.

She was commenced on interferon and zidovudine for HTLV-1, prophylactic intrathecal chemotherapy and posaconazole. Two weeks later treatment with CHOP (cyclophosphamide, doxorubicin, vincristine and prednisolone) was commenced with antifungal prophylaxis changed to liposomal amphotericin due to drug interactions.

A decision to perform left sphenoidectomy was made coinciding with onset of neutropenia. Histopathology showed localised disease, cultures grew *Aspergillus fumigatus.* Amphotericin was increased to treatment dosing. Ten days later she developed fevers with acute left proptosis, progressing to full visual loss. Histopathology from repeat surgery confirmed angioinvasive disease. She was escalated to dual antifungal therapy (initially with the addition of intravenous voriconazole and subsequently a switch from amphotericin to caspofungin) and dexamethasone added when imaging suggested optic neuritis.

Outcomes:
Her vision recovered slightly over the following weeks but she had two further episodes of febrile neutropenia, the second resulting in a decision by her and her family for no further treatment due to increasing debility and she passed away.

Significance:
This case suggests that incidence of HTLV-1 in Australia may not be limited to Indigenous communities and highlights the poor prognosis of HTLV-1 associated leukaemia/lymphoma and the importance of prevention of viral transmission.