

T Cell-related Encephalopathy (CRES) Mimics HIV Encephalitis

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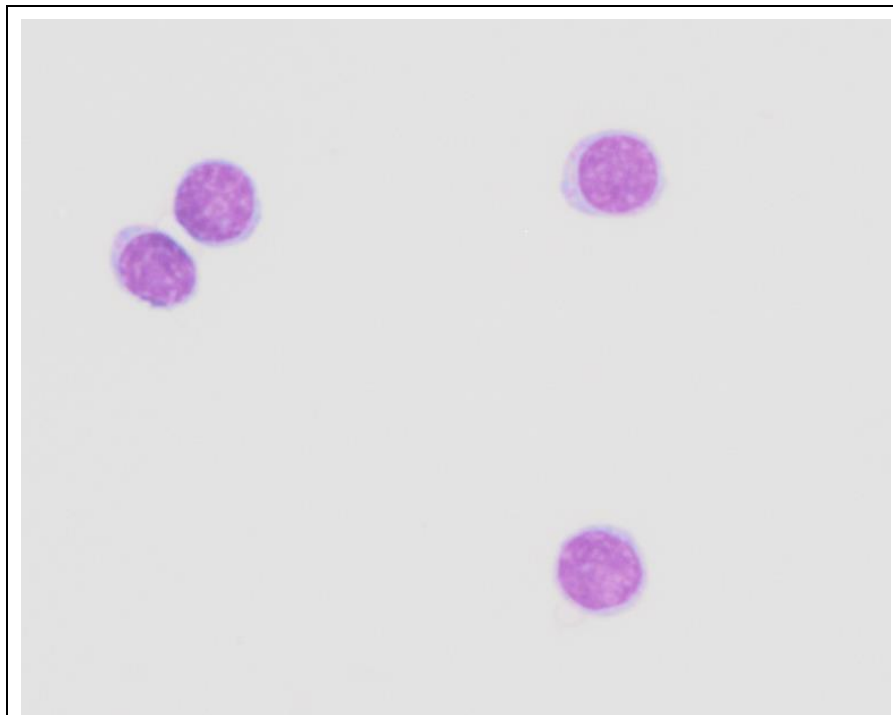


Figure 1: Immune effector cell-associated syndrome (ICANS) presents as a lymphocytic meningitis (haematoxylin and eosin staining, magnification $\times 100$).

Clinical Image

A 61-year-old woman with follicular lymphoma received anti-CD19 CAR-T therapy. She developed cytokine release syndrome (CRS) on day 1, which was resolved with tocilizumab. Subsequently, she developed neurological symptoms, including tremor, aphasia, confusion, and altered mental status, which improved with high doses of corticosteroids. Lumbar puncture revealed lymphocytic meningitis (Figure 1, $\times 100$ objective) with the presence of CAR-T cells targeting CD19 in cerebrospinal fluid (CSF) samples. Commercial quantitative PCR assays for HIV-1/2 RNA on the blood and CSF were highly positive [1].

The detection of CAR-T cells in the CSF either by flow cytometry or by quantitative RT-PCR allowed a high probability diagnosis and guided the treatment. This case highlights the importance of distinguishing CRS from other neurological manifestations that can occur following CAR-T therapy. It also emphasizes the need for careful monitoring of CAR-T cells in blood and CSF, especially in patients with underlying conditions such as HIV infection.

REFERENCES

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