Narcolepsy type 1 in an adolescent with vertical-acquired HIV infection – coincidence or potential trigger?

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Background

The underlying pathogenic mechanism of narcolepsy type 1 (NT1) is thought to be an autoimmune-mediated loss of hypocretin-secreting neurons.¹

Epidemiological data reveal a clear association between NT1 and various infections. However, the association of HIV infection and narcolepsy has not been described so far.^{2,3}

Discussion

- The presented case raises the hypothesis that HIV infection in a host with a distinct genetic susceptibility may trigger autoimmune-mediated destruction of hypocretin-secreting neurons leading to NT1.
- This association has not been described so far possibly because NT1 is underdiagnosed in children and adolescents due to its less typical presentation in this population.
- Analysis of large HIV cohorts might answer the question whether there is a significant association with narcolepsy in children and adolescents infected with HIV.

Case report

15-year-old HIV positive boy presenting with excessive daytime sleepiness and weight gain (Figure 1).

HIV Diagnosis at the age of 8 years in Kinshasa. Uncomplicated course of HIV infection with fully suppressed viral load and no opportunistic infections under effective antiretroviral therapy (abacavir/ lamivudine/ ritonavir-boosted-atazanavir)

No signs of anemia, thyroid gland dysfunction or Cushing-Syndrome; screening for illicit drug intake was negative.

Normal cerebral MRI showing no signs of HIV encephalopathy. No HIV replication in the CSF.

Polysomnography: increased sleep onset REM sleep periods (SOREMs) (3 of 4)

Multiple sleep latency test (MSLT): reduced sleep latency (mean 4 min and 22 s).

Pathologically low hypocretin CSF level (orexin A < 20 pg/ml).

Positive for HLA DQB1*06:02

Diagnosis of NT1 confirmed according to the criteria of the 3rd edition of the International Classification of Sleep Disorders (ICSD-3)

Figure 1: Longitudinal weight curve

References

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