We present a case of anti-N-methyl-D-aspartate (anti-NMDA) receptor encephalitis in a 49 year old gentleman with a known diagnosis of HIV following an admission with acutely worsening confusion and inattention.

This is the fourth reported case of anti-NMDA receptor encephalitis in an HIV positive individual, highlighting the importance of considering auto-immune conditions as a cause of acute confusion in HIV positive patients.

The Background

We present a case of anti-N-methyl-D-aspartate (anti-NMDA) receptor encephalitis in a 49 year old gentleman with a known diagnosis of HIV following an admission with acutely worsening confusion and inattention.

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The Results

- CD4: 180 cells/µL
- Plasma VL: 916 copies/mL
- Resistance pattern in plasma + CSF:
  - NRTI: M184V
  - NNRTI: P225H
  - PI: Q58R
- Serum:
  - CMV Tg: positive
  - Transplasma Tg: negative
  - Syphilis serology: negative
- CSF Infection Panel:
  - HSV/HSV2: not detected
  - EBV: not detected
  - HHV6: not detected
- CSF Autoimmune Panel:
  - VGKC receptor Abs: negative
  - AMY2 receptor Abs: negative
  - GABA receptor Abs: negative
  - NMDA receptor Abs: positive

The Management

- On admission, broad spectrum cover for bacterial and HSV meningocenephalitis.
  - Ceftriaxone: 2g 4 hourly IV
  - Vancomycin: 1.25g SQ IV (titrated)
  - Azithromycin: 500mg BD
- Extended for Listeria and Cryptococcus.
  - Amphotericin B 300mg OD IV
  - Flucytosine 2.5g SOS IV
  - Amoxicillin 2g 4 hourly IV
- High-dose Fabrizies (1+1)x2
  - Neurology review: likely focal seizures
  - commenced on Keppra 500mg BD
  - Loosamide added in as seizures ongoing
- Following positive NMDAR result:
  - Methylprednisolone 500mg IV OD for 3/7 (reduced dose due to ARV booster effect)
  - IVIG 40g, for 5/7 (± 2 courses)
  - ARV switch to Truvada/Dolostegravir for increased CNS penetration

The Conclusion

Anti-NMDA encephalitis is a rare cause of encephalitis in patients with HIV. A growing number of cases are being reported in the literature, and autoimmune encephalitis is not only becoming an increasingly apparent cause of acute confusion in HIV patients, but a potentially reversible one if identified early.

With greater availability and increased efficiency of testing this trend in diagnosis is likely to continue.

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