

A curious case of psychosis post-liver transplant

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BACKGROUND

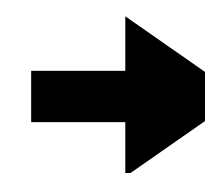
- Psychosis post-transplantation is rarely reported in the literature
- Most cases described are associated with immunosuppressants use (calcineurin inhibitors or corticosteroids) in patients with prior psychiatric disorder.
- Our case illustrate the complexity in **differential diagnosis of psychosis post-transplantation.**

CASE

- 66 year-old woman, no past psychiatric history or substance abuse, with a family history significant for bipolar type I and substance use disorders. She was diagnosed with non-alcoholic steatohepatitis and hepatocellular carcinoma.
- Underwent orthotopic liver transplant, discharged 10 days later after an unremarkable post-surgical course. Readmitted 7 weeks later due to ischemic cholangiopathy, during COVID-19 first outbreak.
- Psychiatry consulted for non-specific symptoms such as "communication impairment", anxiety, depression and "compulsions".
- During assessment, she presents with impairment in attention and memory and various but non fluctuating delusional ideations. Initial diagnosis by consulting liaison psychiatry team: new onset psychosis with cognitive difficulties.

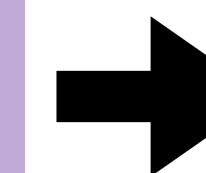
DIFFERENTIAL DIAGNOSES

- Delirium
- Hepatic encephalopathy
- Psychosis secondary to immunosuppressants
- Encephalitis
- PRES*
- Primary psychiatric disorder



INVESTIGATIONS

- Blood tests:
 - Initial high CMV titer
 - Blood culture: gram + cocci in chains
 - Normal Tacrolimus level
- EEG = Diffused slowing
- Cerebral MRI = Unremarkable
- Lumbar puncture:
 - **HSV-1 + PCR**
 - No red cells



INTERVENTIONS

- Acyclovir x 28 days
 - IV antibiotics
 - Olanzapine (ad 20 mg)
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- Improvement in cognition, although persistence of psychotic symptoms
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- Modification of calcineurin inhibitors (Tacrolimus to Cyclosporine, then Basiliximab) => no further improvement

*Posterior reversible encephalopathy syndrome

DISCUSSION

- HSV-1 encephalitis is a rare complication in post-transplantation, although can present with atypical features in immunocompromised patients (Saylor, 2015). Residual psychosis despite appropriate treatment with acyclovir has been previously described in the literature.
- Severe neuropsychiatric symptoms are reported in up to 5% of patients taking calcineurin inhibitors, with psychosis noted as a rare complication (Bechstein, 2000). Another complication of calcineurin inhibitors is PRES, which can present with speech disturbances, hallucinations and agitation (Keynejad, 2020).
- New onset psychosis post-liver transplant should prompt broad investigations for an underlying precipitant.

CONCLUSION

- Psychosis post-transplantation is a rare and complex condition with a broad differential diagnosis. Multidisciplinary involvement is essential.
- Further studies are required to better delineate optimal investigation and management

REFERENCES

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- Saylor D, Thakur K, Venkatesan A. Acute encephalitis in the immunocompromised individual. *Curr Opin Infect Dis.* 2015;28(4):330-6.