

My Ovary Is Driving Me Crazy!: A Case of Anti-NMDAR Encephalitis with Ovarian Teratoma

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Introduction

Anti-N-methyl-D-aspartate receptor (NMDAR) encephalitis is a rare autoimmune disorder characterized by the production of IgG antibodies against NR1 subunit of NMDA receptors in the brain which are crucial for synaptic plasticity. Many would be unfamiliar with its clinical presentation, as it was not characterized in literature until recently, resulting delay in diagnosis and treatment.

Case Description

- ❖ 33-year-old woman no prior medical history
- ❖ Month-long history of headaches
- ❖ Exhibited auditory and visual hallucinations
- ❖ Disoriented in the emergency department
- ❖ Developed refractory seizures
- ❖ Required intubation and high sedation
- ❖ Initiated intravenous Adrenaline due to persistent bradycardia in ICU

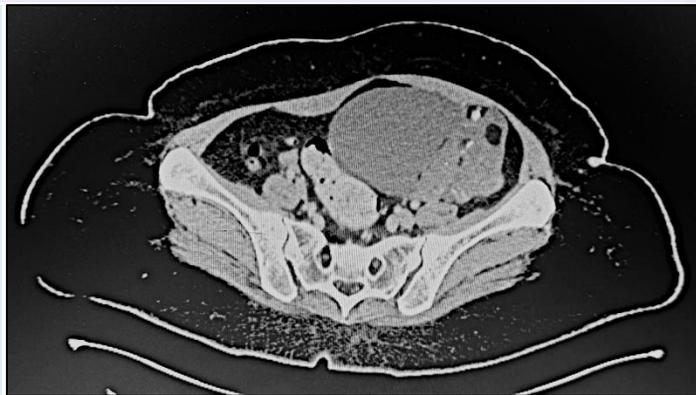


Figure 1: A slice of CT TAP showing left ovarian teratoma

Investigation Findings

CT Brain & CECT Brain	No ICB or abnormal lesions
MRI Brain	Early subacute bleed at right hippocampus, right temporal hippocampus haemorrhage may represent cavernoma
CT TAP	Large left ovarian teratoma
Serum NMDAR antibodies	POSITIVE
CSF NMDAR antibodies	POSITIVE

Discussion

This case demonstrates key clinical and diagnostic features of anti-NMDAR encephalitis

- ✓ High suspicion in young women
- ✓ Constellation of symptoms: psychiatric disturbances, cognitive impairment, seizures
- ✓ Consider autonomic dysfunction
- ✓ Perform routine bedside ultrasound to screen for ovarian teratomas

This patient completed a course of intravenous Methylprednisolone and proceeded with an emergency laparotomy left salphingo-oophorectomy. She was given intravenous Cyclophosphamide and then was discharged with a tapering dose of oral Prednisolone.

Conclusion

- Emergency physicians play a vital role in the diagnosis of anti-NMDAR encephalitis.
- With prompt referrals to respective teams, expediting the treatment of immunotherapy and tumour excision will yield a better patient outcome.

Reference

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2. Barry H, Hardiman O, Healy DG, Keogan M, Moroney J, Molnar PP. Anti-NMDA receptor encephalitis: An important differential diagnosis in psychosis. *Br J Psychiatry*. 2015 Jun;206(6):508-9. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6007532/>