AWARD FOR THE HIGHEST SCORE DURING THE ABSTRACT REVISION PROCESS FOR CASE REPORTS, 1st PLACE:

03. ANTI-NMDA ENCEPHALITIS ASSOCIATED WITH A MATURE OVARIAN TERATOMA: A COMPELLING CASE REPORT

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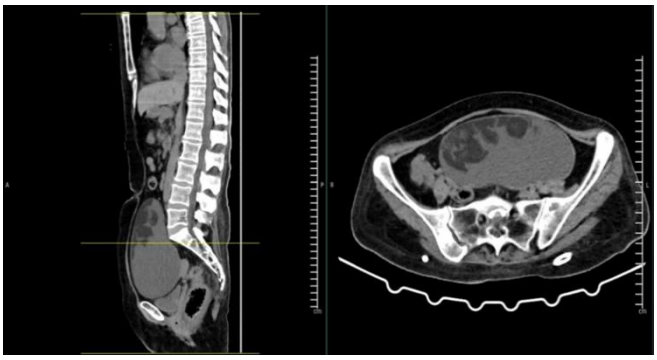
https://www.youtube.com/live/fSpXH-3Xy5w?t=22370s

BACKGROUND: Anti-N-methyl-D-aspartate receptor (anti-NMDAR) encephalitis is a paraneoplastic and autoimmune disorder characterized by prominent neuropsychiatric manifestations. About 80% of reported cases occur in females, and approximately half of these patients have an ovarian teratoma. The NMDA receptor, located in the hippocampus and forebrain, plays a critical role in memory, cognition, and learning. The pathogenesis of anti-NMDAR encephalitis is driven by an autoimmune mechanism in which the body produces autoantibodies (anti-NMDAR) that internalize and alter the NR1 subunit of the NMDA receptor, leading to decreased synaptic function and neuropsychiatric symptoms. Anti-NMDAR encephalitis accounts for 54% to 80% of autoimmune encephalitis cases. First reported in 2007, two young female patients (ages 15 and 19) with ovarian teratomas exhibited neuropsychiatric symptoms such as psychosis, seizures, autonomic instability, memory loss, dyskinesias, and speech disorders, all of which improved significantly after teratoma removal (Zhang et al., 2020; Lui et al., 2022). The average age of onset is 21 years, but cases have been reported in patients ranging from 8 months to 85 years. Early surgical excision of the teratoma and immunosuppression can lead to better outcomes and reduced relapse rates. Anti-NMDAR encephalitis is the most common cause of encephalitis in patients under 30 years, often misdiagnosed due to its varied clinical presentations. **THE CASE:** We present the case of a 56-year-old female with no medical history who was admitted to the emergency room on February 15, 2023, with dysphagia, anorexia, drowsiness, nausea, muscle weakness, altered mental state, confusion, and unresponsiveness. Initially diagnosed with anxiety and major depressive disorder with psychotic symptoms at Methodist Hospital in Houston, she was treated with multiple medications but showed no significant improvement. Her condition deteriorated, with worsening cognitive, psychiatric, and motor function. Upon transfer to Hospital Ginequito in Monterrey, Mexico, on March 26, 2023, further evaluation revealed cortical atrophy on MRI, macrocytic anemia, electrolyte imbalances, and primary hypothyroidism. Despite treatment for suspected HSV-associated limbic encephalitis, her condition continued to decline, leading to generalized seizures. Anti-NMDA receptor encephalitis was diagnosed based on positive anti-NMDAR antibodies in serum and cerebrospinal fluid. An abdominopelvic CT scan identified a mature ovarian teratoma in the left ovary, measuring approximately 891 cc. Given the strong association between ovarian teratomas and anti-NMDA receptor encephalitis, she underwent a left salpingo-oophorectomy. Pathology confirmed a teratoma with a mural nodule containing osseous, neural, glial, and gastrointestinal tissue. Following immunotherapy with IV methylprednisolone and immunoglobulins, as well as the surgical removal of the teratoma, the patient showed significant clinical improvement. She regained mobility and cognitive function and was stable at the one-month follow-up. **CONCLUSION:** In the present case, a diagnosis of anti-NMDA receptor encephalitis was reported, after the presence of a mature ovarian teratoma containing neural tissue. This finding is uncommon in this pathology and has been proposed as the triggering factor for the reported encephalitis. Anti-NMDA receptor encephalitis involves various stages of the disease, which can potentially lead to death. Due to the broad spectrum of symptoms, it can mimic other psychiatric disorders, underscoring the importance of serological examination.

Figure: Abdominopelvic CT Scan Showing a Mature Ovarian Teratoma Associated with Anti-NMDAR Encephalitis.



Legend: The image shows an oval, well-defined lesion with fat density, cystic components, and nodular calcification. It measures 150 x 76 x 147 mm, with a volume of 891 cc. There is slight peripheral enhancement post-contrast, and the lesion is near the left ovary, displacing adjacent structures.

Key Words: Benign tumors, ovarian teratoma, and anti-NMDA receptor encephalitis.