Gynecological intervention for patient with anti-NMDA receptor encephalitis

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This case illustrates the importance of having active gynecological intervention for patients with sudden onset of anti-NMDA receptor encephalitis with the presence of ovarian dermoid cysts. An 18-year-old Chinese lady was presented with acute onset of confusion, development of unsteady gait, slurring of speech and gradual deterioration of Glasgow Coma Scale. Lumbar puncture was performed and cerebrospinal fluid revealed mild leukocytosis and a slight elevation in protein. CT and MRI brain, septic workup and toxicology screening were all normal. Patient was treated as viral meningoencephalitis with acyclovir and antibiotics. Nevertheless, she developed episodes of tonic-clonic seizures requiring intubation and admission to intensive care unit. Serum auto-antibody titer was checked and anti-NMDA receptor antibody was positive. Diagnosis of anti-NMDA receptor antibody encephalitis was made. She was treated with prednisolone, plasmapheresis, IVIG and rituximab. CT abdomen and pelvis scan revealed a 4x3x2 cm right ovarian teratoma. Emergency laparoscopic right ovarian cystectomy was done and histology confirmed the presence of mature cystic teratoma. Her conscious level gradually improved 5 weeks after the operation and she was discharged 13 weeks afterwards. Subsequent follow-up showed she has a full recovery with neither seizure nor other functional deficits. Anti-NMDA receptor antibody encephalitis was first discovered in 2007 and around half of the cases were associated with ovarian teratoma. It is thought that this condition can be caused by auto-antibodies produced by cross-reactivity with NMDA receptors in teratomas. Ovarian cystectomy can improve this condition as it can eradicate the source of auto-antibodies.

Biography

Yau Bong Winsom Ho is an Associate Consultant and Team Leader of Assisted Reproductive Technology Unit in United Christian Hospital in Hong Kong. He has performed a wide range of fertility surgeries, advanced laparoscopic surgeries and advanced hysteroscopic surgeries including laparoscopic myomectomy and total laparoscopic hysterectomy for complex cases.

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