

JEFFREY BRITTON, M.D.: The main importance in making the diagnosis is patients with autoimmune epilepsy frequently are not controlled with anti-seizure medication. Often immunotherapy is needed in addition to seizure medication therapy. In studies that we've done, we can make a huge impact on seizure burden with immunotherapy in these patients. Many of these patients had failed two or more seizure medications, often in combination. So the usual medications one is accustomed to using to help treat seizures don't work, typically, in this disorder.

Immunotherapy consists of either intravenous steroids or oral steroids or medication treatment called IVIG therapy, which is an infused therapy. These therapies are given over a 12-week period of time. They help suppress the immune system to prevent the immune system from making the antibodies that are triggering the autoimmune encephalitis that's leading to the seizures.

If they respond significantly, oftentimes chronic immunotherapy is needed-- in other words, drugs used to help keep the immune system suppressed for a longer period of time, which allows us to gradually taper off the steroid or IVIG treatment. The total treatment can go on for a few years in some cases to help keep the immunologic problem at bay, to help keep the seizures under control.

Another reason to make the diagnosis of autoimmune epilepsy and why it's important-- sometimes autoimmune epilepsy can occur as a condition called a paraneoplastic syndrome. And antibodies directed at a small tumor somewhere in the body sometimes can cross-react with the neurologic tissue, leading to autoimmune epilepsy as a consequence. So sometimes the autoimmune epilepsy can be a clue that there might be an occult tumor somewhere in the body.

So for certain antibody types we know, if a patient has them, they're at risk of having a tumor. There are other antibody types where the risk of a tumor somewhere in the body is very, very low. But we've made the diagnosis of very small cancers in some patients who have presented to us with autoimmune epilepsy syndromes in the course of their evaluation.

Neurologists, and patients and families, if a patient has come down with seizures and they are highly frequent from the get-go-- from the onset of the epilepsy-- the epilepsy has been fairly recent onset and come on very quickly, patients who are having mainly a seizure type called partial seizures-- especially if there is some memory impairment that's occurred-- and if there's a past history and a current history of any additional autoimmune conditions, those should all be red flags to clue a neurologist to consider a referral to refer that patient for the possibility of autoimmune epilepsy.

The workup is somewhat complicated. Blood tests are done to help make the diagnosis, but sometimes that's insufficient. Sometimes a spinal tap is necessary, and spinal fluid needs to be sent to test for antibodies as well.

Here at Mayo, it's seamless to do those things. The lab is right here. The spinal fluid area knows exactly where to

send the spinal fluid for testing.

PET scanning is sometimes necessary. Certain types of MRI testing are sometimes necessary, in addition. And the radiologists here are very accustomed to seeing studies on these patients at this point. And they also have a depth of knowledge about the radiologic features of these conditions, in addition.