

### Rare Organic Causes of First Episode Psychosis

When evaluating patients having their first episode of psychosis, the work-up routinely involves a thorough search for medical and neurological conditions. This includes a complete medical evaluation, review of systems, physical examination with a neurological exam, and usually the following tests: a complete blood count, electrolytes, liver function, pregnancy (where appropriate), serum creatinine, blood urea nitrogen, thyroid function, sexually transmitted infections, and a toxicology screen.<sup>1,2</sup> Optional tests, such as erythrocyte sedimentation rate, antinuclear antibodies, and lumbar puncture might be necessary.<sup>2</sup> Should the neurological exam reveal any “asymmetry, weakness, or an altered sensorium” or if the psychosis is atypical (i.e., a first episode at age 70), brain imaging (computed tomography or magnetic resonance imaging) and an electroencephalogram should be obtained.<sup>1</sup> Additionally, the differential diagnosis should include the following possible diagnoses: schizophrenia and related disorders; mood disorders with psychosis; psychosis due to a medical condition; delirium due to a medical condition; dementia due to a medical condition; substance-induced psychotic disorder; substance-induced psychotic delirium; substance-induced intoxication or withdrawal; conversion disorder; and malingering.<sup>2</sup>

What if, after a thorough evaluation, the only possible diagnosis given was brief psychotic disorder since the duration of psychosis was less than one month? The patient would be promptly treated with atypical antipsychotics, benzodiazepines, and possibly other medications.<sup>2</sup> Eventually, after some period of time the patient would be discharged into the community with a follow-up plan to visit a psychiatrist. What would happen if this same patient became psychotic again, this time returning to the hospital four months from the initial episode with perhaps more pronounced memory problems and maybe

some catatonia? This same patient would be more or less treated as before, but because this patient had returned with another psychotic episode, the diagnosis might be changed to reflect schizophreniform disorder because the patient’s symptoms now have lasted for more than one month but less than six months. Let us once again imagine this same patient returning seven months since the first psychotic episode. Now the diagnosis has evolved into schizophrenia, and the patient would likely be given a new mix of psychiatric medications, possibly a different atypical antipsychotic, a benzodiazepine, a hypnotic agent for sleep, and an antidepressant for low moods.

The pattern I described is not that uncommon and many life events and problems can trigger patients into this never-ending cycle of psychosis, hospital readmission, and discharge. We very much want there to be obvious organic causes to the complexity of schizophrenia, and yet less than 6% of all first episode cases can be attributed to organic diseases.<sup>3</sup> Even for rare organic causes, such as gluten encephalopathy,<sup>4</sup> vitamin B<sub>3</sub> deficiency (i.e., pellagra),<sup>5</sup> and anti-N-methyl-D-aspartate receptor (NMDAR) encephalitis,<sup>6</sup> the clinical reality is that they are hardly ever involved when psychosis rears its ugly head. It is interesting to note that some preliminary research has shown that 6.5% of 46 patients with first episode schizophrenia had NMDAR antibodies and fulfilled the diagnostic criteria for schizophrenia.<sup>7</sup> Thus, it is conceivable that as more is known about these rare causes of schizophrenia, more organic diseases might be uncovered with potentials for actual cure, which would be preferable to being maintained on psychiatric medications for life.

In this issue, I present an educational article on schizophrenia with its associated orthomolecular treatment. I specifically address management issues pertaining to cases where no underlying organic disease was found. I also discuss why so much uncertainty exists with the orthomolecular treatment of schizophrenia. I look forward to the day when organic causes can be found in more

than a small proportion of first episode cases. Until such time exists, the orthomolecular approach will continue to have limited efficacy in the treatment of schizophrenia because of the brain-disabling<sup>8</sup> and toxic effects<sup>9</sup> that psychiatric medications possess.



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